SITE DEVELOPMENT PLANS
PREPARED FOR
NORTHERN PASS TRANSMISSION, LLC
PROPOSED TRANSITION STATION #1

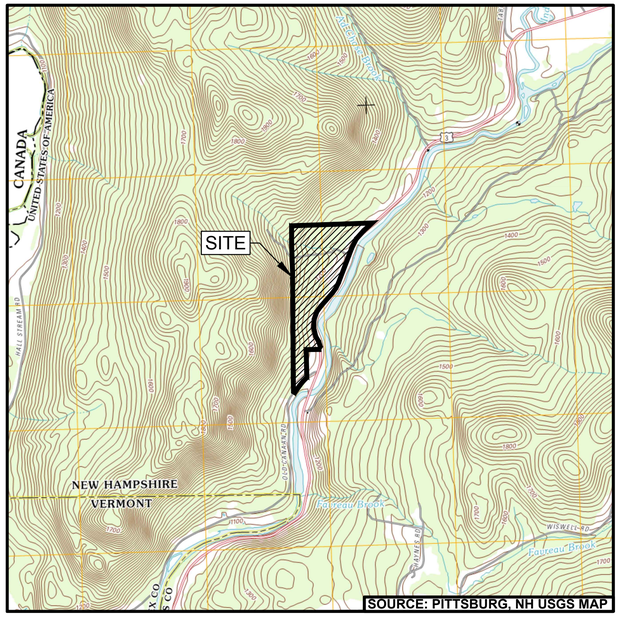
OLD CANAAN ROAD, PITTSBURG, NH 03592

OWNER:

THE NORTHERN PASS

ENGINEER:

BURNS McDONNELL



NORTH

VICINITY MAP

0 2000' 4000'

SCALE IN FEET

OCTOBER 1, 2015

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

DRAWING INDEX	
DRAWING	DESCRIPTION
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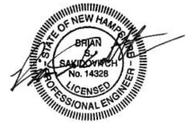
NEW HAMPSHIRE STATE LAW REQUIRES HOMEOWNERS AND CONTRACTORS TO CONTACT DIG SAFE, BY DIALING 8-1-1 AT LEAST THREE BUSINESS DAYS BEFORE BEGINNING ANY DIGGING OR EXCAVATION PROJECT. WHEN DIG SAFE RECEIVES A CALL, THE HOMEOWNER OR CONTRACTOR MUST WAIT 72 BUSINESS HOURS. DURING THIS TIME, UTILITY REPRESENTATIVES RESPOND TO MARK THEIR LINES WITHIN YOUR PRE-MARKED AREA. ALL INFORMATION REGARDING DIG SAFE RULES AND REGULATIONS CAN ALSO BE FOUND AT www.digsafe.com.



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Oct 5 2015

NO.	ISSUED FOR: PERMITTING REVISION	DATE	DRWN	ChkD	APPRV.
1		10/1/15	JJS	RLR	BSS

THE NORTHERN PASS

Transmission Business

#

TRANSITION STATION #1
COVER SHEET

DATE: 4/28/2015

SCALE: AS NOTED

DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN:
OLD CANAAN ROAD, PITTSBURG, NH

TRANSMISSION LINE:

MILE NO:

SHEET 1 OF 19

NPTT101-CVR

REVISION: XXX

\\BMCD\DFS\CLIENTS\TND\NUSC\58466_NPT\DESIGN\SUBSTATION\100-TRANSITION_STATION-1\CADD\CIVIL-SITE\NPTT101-CVR.DWG 10/2/2015 12:58 PM KAMARX

BACKGROUND NOTES:

1. BACKGROUND INFORMATION TAKEN FROM "EXISTING CONDITIONS PLAN" FOR TRANSITION STATION #1, OLD CANAAN ROAD, PITTSBURG, NH. PREPARED BY CHA, CONSULTING, INC. DATED AUGUST 26, 2014. LAST REVISED OCTOBER 14, 2014. SURFACE OBSERVABLE INFORMATION SHOWN HEREON IS THE RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY CHA, CONSULTING INC. ON OR BETWEEN OCTOBER 16, 2013 AND AUGUST 22, 2014. WETLAND FLAGS SHOWN HEREON ARE BASED ON FIELD LOCATIONS BY CHA, CONSULTING, INC. IN NOVEMBER 2013. LOCATIONS PROVIDED BY NORMANDEAU, WETLANDS WERE DELINEATED BY NORMANDEAU IN 2013.

2. ELEVATIONS, CONTOURS AND BENCHMARKS ARE BASED ON NAVD 1988 VERTICAL DATUM.

3. HORIZONTAL LOCATIONS ARE BASED ON NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM NAD 83.

4. THERE ARE DELINEATED WETLANDS AND WATERCOURSES LOCATED ONSITE. REFER TO WETLANDS, RIVERS, STREAMS AND VERNAL POOLS DELINEATION REPORT BY NORMANDEAU ENVIRONMENTAL CONSULTANTS DATED NOVEMBER 22, 2013.

5. THE SITE IS LOCATED WITHIN ZONE 'X' FLOOD ZONE AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NUMBER 33007C0215D PANEL 215 OF 1300, COOS COUNTY, NH, DATED FEBRUARY 20, 2013.

6. PROPERTY AREA = 93±-AC, NPDES/LIMIT OF DISTURBANCE (LOD) AREA TOTAL = 3.03-ACRES (OF WHICH 2.09-ACRES IS ON-SITE, 0.88-ACRES IS OFF-SITE IN EVERSOURCE RIGHT-OF-WAY, AND 0.06-ACRES IS OFFSITE IN OLD CANAAN ROAD).

GENERAL NOTES:

1. GENERAL NOTES SHALL APPLY TO THE SITE DEVELOPMENT PLANS THROUGHOUT. REFER TO INDIVIDUAL SHEETS FOR SHEET SPECIFIC NOTES.

2. CONTRACTOR(S) TO TAKE AND VERIFY ALL DIMENSIONS AND CONDITIONS OF THE WORK AND BE RESPONSIBLE FOR COORDINATION OF SAME. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO START OF WORK.

3. ENGINEER ASSUMES NO RESPONSIBILITY AS TO THE CONTENT OF THE EXISTING CONDITIONS PLAN INCLUDING BUT NOT LIMITED TO LOCATION, SIZE, AND ELEVATIONS OF UTILITIES AND STRUCTURES NOT VISIBLE AND WHERE TAKEN FROM PLANS BY OTHERS.

4. EXISTING CONDITIONS SURVEY INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT “DIGSAFE” PRIOR TO COMMENCEMENT OF WORK AT “811” AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.

5. THE CONTRACTOR SHALL VERIFY ALL EXISTING SITE AND BUILDING CONDITIONS IN THE FIELD AND CONTACT THE OWNER AND ENGINEER IF THERE ARE ANY QUESTIONS AND/OR CONFLICTS REGARDING THE SITE DEVELOPMENT PLANS AND/OR EXISTING FIELD CONDITIONS PRIOR TO CONSTRUCTION. REFER TO THE PROJECT SPECIFICATIONS MANUAL FOR ADDITIONAL INFORMATION. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED, EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, INFORM THE OWNER AND CONSULT THE CIVIL ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.

6. ALL CONSTRUCTION SHALL COMPLY WITH PROJECT SPECIFICATION MANUAL, EVERSOURCE STANDARDS AND SPECIFICATIONS, AND THESE PLANS. IF SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL APPLY. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS. INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
   a. NEW HAMPSHIRE STORMWATER MANUAL, VOLUMES 1, 2 & 3, DECEMBER 2008.
   b. NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION MANUAL ON DRAINAGE DESIGN FOR HIGHWAYS, REVISION DATE APRIL 1998.
   c. NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND SPECIFICATIONS (2010).
   d. EVERSOURCE BEST MANAGEMENT PRACTICES MANUAL (TO BE FURTHER DEVELOPED).
   e. EVERSOURCE STANDARD SPECIFICATIONS (10-24-2014).

7. DO NOT INTERRUPT EXISTING SERVICING UTILITIES AND FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER, THE LOCAL MUNICIPALITIES, THE UTILITY PROVIDER, AND ANY APPLICABLE REGULATORY AGENCY. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.

8. THE CONTRACTOR SHALL PROVIDE RECORD AS-BUILT DRAWINGS OF ALL CONSTRUCTION IN ACCORDANCE WITH OWNER AND REGULATORY AGENCY REQUIREMENTS (INCLUDING UNDERGROUND UTILITIES) TO THE OWNER AT THE END OF CONSTRUCTION.

9. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING PLANS. IN CASE OF CONFLICT BETWEEN PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.

10. IF A CONFLICT ARISES BETWEEN PLANS, SPECIFICATIONS, AND/OR DETAILS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.

11. THE CONTRACTOR SHALL ABIDE BY ALL OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS IN ALL INSTANCES AND WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENT FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.

12. THE ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ENGINEER HAS NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.

13. ALL NOTES AND DIMENSIONS DESIGNATED "TYPICAL" OR "(TYP.)" APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PROJECT.

14. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF SUBMITTED, REVIEWED, AND APPROVED BY THE OWNER, ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO CONSTRUCTION.

15. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS AND MATERIALS PER PLANS AND SPECIFICATIONS TO THE OWNER AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ORDERING, FABRICATION, OR DELIVERY TO THE SITE. FOR EACH SUBMITTAL, ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.

16. THE CONTRACTOR SHALL RESTORE ANY DRAINAGE STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, LANDSCAPED AREAS OR SIGNAGE AND OTHER INCIDENTAL DISTURBANCES AND DAMAGES DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE OWNER, ENGINEER AND REGULATORY AGENCY.

17. THE CONTRACTOR SHALL COMPLY WITH 29 CFR PART 1926 FOR EXCAVATION TRENCHING AND TRENCH PROTECTION REQUIREMENTS.

18. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.

19. DEMOLITION OF EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO BUILDINGS, STRUCTURES, PAVEMENT, WELLS, SEPTIC, SANITARY SEWER, FENCES, TREES, ETC. SHALL BE PER THE DIRECTION OF EVERSOURCE AND SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

20. PERMANENT BENCHMARKS SHALL BE INSTALLED UPON COMPLETION OF CLEARING.

21. ELECTRICAL SUBSTATION COMPONENTS, UNDERGROUND TRANSMISSION LINES, OVER HEAD TRANSMISSION LINES AND THEIR FOUNDATIONS DEPICTED HEREIN ARE FOR REFERENCE ONLY.

22. ANY CLEARED AND EXCAVATED MATERIALS WHICH ARE SUSPECTED OF BEING ENVIRONMENTALLY POLLUTED, CONTAMINATED, OR IMPACTED SHALL BE STOCKPILED ON-SITE ON TOP OF POLYETHYLENE SHEETING AND COVERED WITH POLYETHYLENE SHEETING. THE OWNER AND ENGINEER SHALL BE IMMEDIATELY INFORMED UPON ENCOUNTERING THIS MATERIAL. STORAGE, TESTING, TREATMENT, REMOVAL, AND DISPOSAL OF ENVIRONMENTALLY POLLUTED, CONTAMINATED, OR IMPACTED MATERIAL SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

23. CONTRACTOR SHALL TAKE PRECAUTIONS TO ENSURE NO DISTURBANCE BEYOND THE DEPICTED LIMIT OF DISTURBANCE.

24. THE CONTRACTOR SHALL ESTABLISH BEST MANAGEMENT PRACTICES FOR BLASTING OF BEDROCK IN ACCORDANCE WITH THE NHDES PUBLICATION WD-10-12. ROCK BLASTING AND WATER QUALITY MEASURES THAT CAN BE TAKEN TO PROTECT WATER QUALITY AND MITIGATE IMPACTS, 2010. IF THE BLAST ROCK VOLUME GENERATED IS GREATER THAN 5,000 CUBIC YARDS, THE CONTRACTOR SHALL DEVELOP A GROUNDWATER MONITORING PROGRAM FOR SUBMISSION TO THE OWNER AND ENGINEER. BLASTING SHALL NOT COMMENCE UNTIL THESE REQUIREMENTS ARE APPROVED BY THE NHDES, AS REQUIRED.

25. PROPOSED STORM DRAINAGE SYSTEM SHALL BE HS-20 RATED.

EXISTING LEGEND

	PROPERTY LINE
	ADJOINING PROPERTY LINE
	RIGHT OF WAY LINE
	EASEMENT LINE
385	MAJOR CONTOUR
381	MINOR CONTOUR
	TREELINE
OHW	OVER HEAD WIRE
	STOCKADE FENCE
	CHAIN LINK FENCE
	WETLANDS LINE
	STREAM OR WATERWAY
	STONEWALL
WF600-9	WETLAND FLAG
IP	IRON PIPE
CB/DH	CONCRETE BOUND WITH DRILL HOLE
SB/DH	STONE BOUND WITH DRILL HOLE
	SURVEY CONTROL POINT
	UTILITY POLE
	WETLANDS

PROPOSED LEGEND

385	MAJOR CONTOUR
381	MINOR CONTOUR
	TREELINE
	PERIMETER FENCE
	GUIDERAIL
	SILT FENCE
	CONSTRUCTION FENCE
	LIMIT OF STONE SURFACING
LOD	LIMIT OF DISTURBANCE
	STORMWATER SWALE
	STORM SEWER PIPE
	STORM INLET
	MANHOLE
	OUTLET CONTROL STRUCTURE
	FLARED END SECTION
CO	CLEANOUT
380.50	SPOT ELEVATION
	RIP RAP
	STONE SURFACING
UaC UaD	NRCS SOIL TYPE/BOUNDARY

LIST OF ABBREVIATIONS

ACP	ASBESTOS CEMENT PIPE
APT	ANGLE POINT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BIT	BITUMINOUS CONCRETE
BLDG	BUILDING
BM	BENCH MARK
BW	BOTTOM OF WALL
CB	CATCH BASIN
CATV	CABLE TELEVISION
CI	CAST IRON PIPE
CIC	CAST IRON COVER
℄	CENTERLINE
CL	CENTERLINE
CLF	CHAIN LINK FENCE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
COR	CORNER
CTRS	CENTERS
DIA	DIAMETER
DMH	DRAINAGE MANHOLE
E	EASTING
EL	ELEVATION
EMH	ELECTRIC MANHOLE
EOP	EDGE OF PAVEMENT
EXP	EXPANSION
EXIST	EXISTING
G	GAS
GALV	GALVANIZED
GR	GRATE
HDPE	CORRUGATED HIGH DENSITY POLYETHYLENE PIPE
HT	HEIGHT
INV	INVERT
LBS	POUNDS
LF	LINEAR FOOT
LG	WALL HIGH GRADE
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
N	NORTHING
NO	NUMBER
NOM	NOMINAL
OC	ON CENTER
OCS	OUTLET CONTROL STRUCTURE
OD	OUTSIDE DIMENSION
PC	POINT OF CURVATURE
POB	POINT OF BEGINNING
PIV	POST INDICATOR VALVE
PRC	POINT OF REVERSE CURVATURE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE PIPE
R	RADIUS
RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SESC	SOIL EROSION AND SEDIMENT CONTROL
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
SSFM	SANITARY SEWER FORCE MAIN
SQ FT	SQUARE FOOT
SQ M	SQUARE METER
TYP	TYPICAL
TW	TOP OF WALL
UC	UNDERGROUND COMMUNICATION
UD	UNDERDRAIN
UE	UNDERGROUND ELECTRICAL
UP	UTILITY POLE
VC	VITRIFIED CLAY PIPE
W/O	WITHOUT

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Oct 5 2015

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NO.	ISSUED FOR PERMITTING REVISION	DATE	DRWN	CHKD	APPRV.
1	ISSUED	10/7/15	JJS	RLR	BSS

THE NORTHERN PASS
Transmission Business

TRANSITION STATION #1
GENERAL NOTES AND LEGEND

DATE: 10/7/2015
SCALE: N/S

DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN:
OLD CANAAN ROAD, PITTSBURG, NH

TRANSMISSION LINE:

MILE NO:

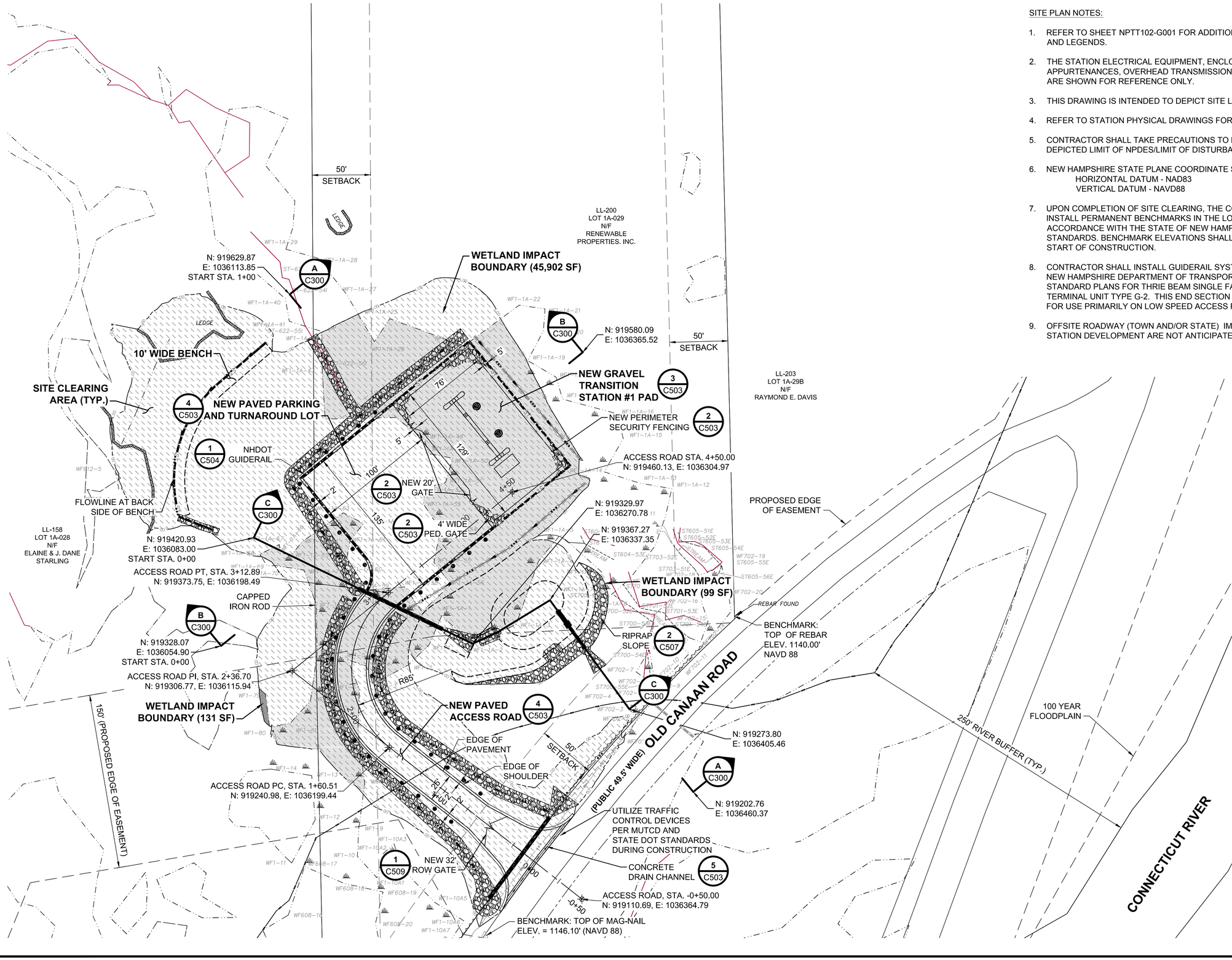
SHEET 2 OF 19

NPTT102-G001

REVISION: XXX

SITE PLAN NOTES:

1. REFER TO SHEET NPTT102-G001 FOR ADDITIONAL GENERAL NOTES, ABBREVIATIONS, AND LEGENDS.
2. THE STATION ELECTRICAL EQUIPMENT, ENCLOSURES, FOUNDATIONS, OTHER STATION APPURTENANCES, OVERHEAD TRANSMISSION, AND UNDERGROUND TRANSMISSION ARE SHOWN FOR REFERENCE ONLY.
3. THIS DRAWING IS INTENDED TO DEPICT SITE LAYOUT ONLY.
4. REFER TO STATION PHYSICAL DRAWINGS FOR FENCE AND GATE DETAILS.
5. CONTRACTOR SHALL TAKE PRECAUTIONS TO ENSURE NO DISTURBANCE BEYOND DEPICTED LIMIT OF NPDES/LIMIT OF DISTURBANCE.
6. NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM
   HORIZONTAL DATUM - NAD83
   VERTICAL DATUM - NAVD88
7. UPON COMPLETION OF SITE CLEARING, THE CONTRACTOR SHALL FURNISH AND INSTALL PERMANENT BENCHMARKS IN THE LOCATIONS DEPICTED ON THE PLANS IN ACCORDANCE WITH THE STATE OF NEW HAMPSHIRE SURVEYING CODES AND STANDARDS. BENCHMARK ELEVATIONS SHALL BE SET IN FIELD AND VERIFIED PRIOR TO START OF CONSTRUCTION.
8. CONTRACTOR SHALL INSTALL GUIDERAIL SYSTEMS AS DEPICTED IN ACCORDANCE WITH NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND STANDARD PLANS FOR THRIE BEAM SINGLE FACED GUIDERAIL WITH STEEL POSTS AND TERMINAL UNIT TYPE G-2. THIS END SECTION IS NOT CRASH WORTHY. IT IS INTENDED FOR USE PRIMARILY ON LOW SPEED ACCESS ROADS WHERE IT CAN NOT BE HIT.
9. OFFSITE ROADWAY (TOWN AND/OR STATE) IMPROVEMENTS AS A RESULT OF THE STATION DEVELOPMENT ARE NOT ANTICIPATED.



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NO.	REVISION	DATE	DRWN	CHKD	APPRV
1	ISSUED FOR PERMITTING	10/7/15	JJS	RLR	BSS

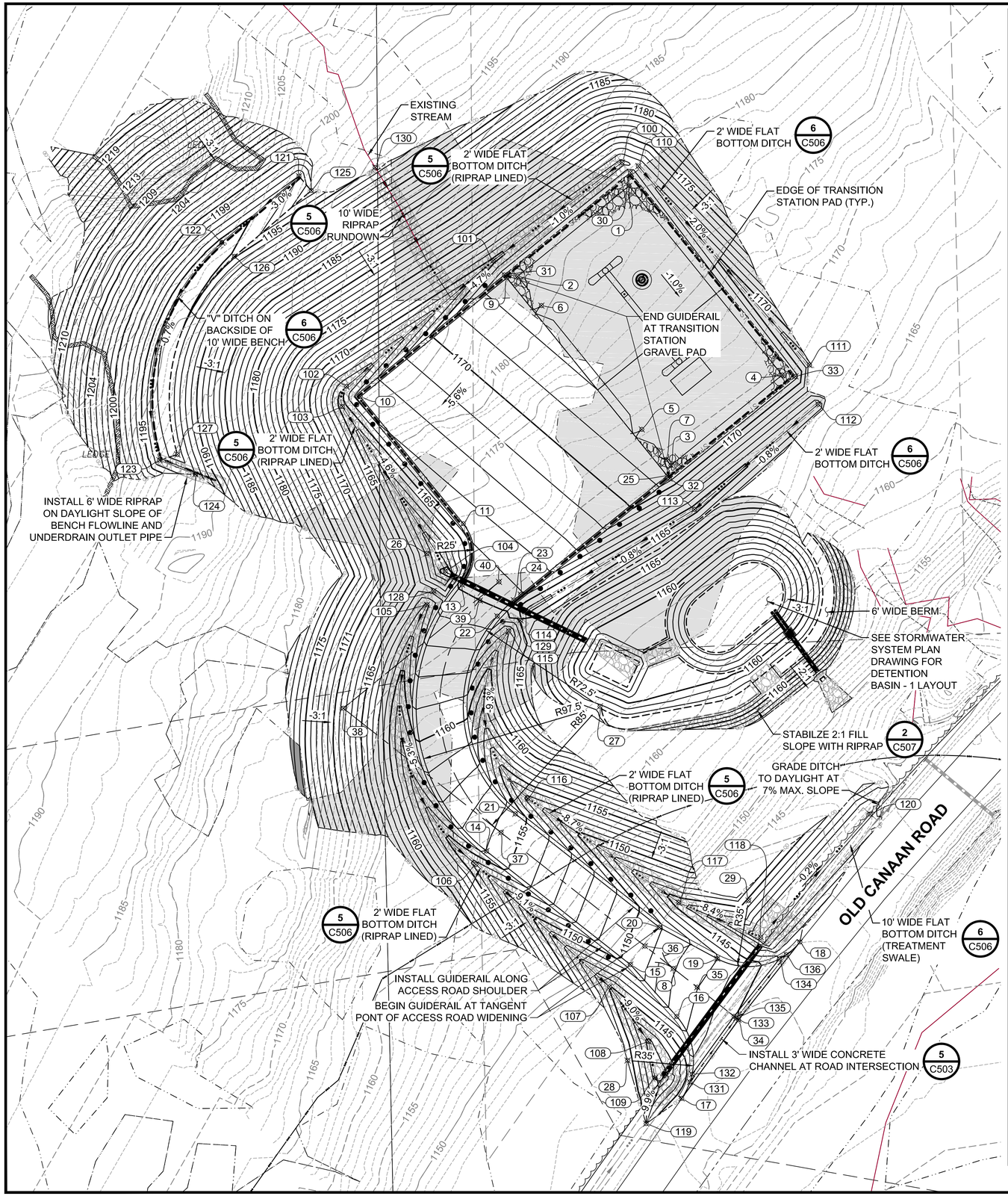
THE NORTHERN PASS
Transmission Business

TRANSITION STATION #1
SITE LAYOUT PLAN

DATE: 10/1/2015
SCALE: 1" = 40'

DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN: OLD CANAAN ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 3 OF 19
NPTT103-C100
REVISION: XXX



POINT TABLE

PNT	NORTHING	EASTING	ELEV.	DESCRIPTION
1	919583.55	1036267.42		CHAIN-LINK FENCE CORNER
2	919535.67	1036208.40		CHAIN-LINK FENCE CORNER
3	919435.49	1036289.67		CHAIN-LINK FENCE CORNER
4	919483.37	1036348.68		CHAIN-LINK FENCE CORNER
5	919454.53	1036274.23		CENTERLINE 20' CHAIN-LINK GATE
6	919520.15	1036220.99		CENTERLINE 20' CHAIN-LINK GATE
7	919438.60	1036287.15		HINGE POINT 4' CHAIN-LINK GATE
8	919168.87	1036290.96		CENTERLINE 32' ROW GATE
9	919534.85	1036202.62	1172.77	ASPHALT CORNER
10	919471.84	1036124.97	1167.25	ASPHALT CORNER
11	919404.52	1036179.59	1166.39	ASPHALT PC
13	919372.23	1036178.92	1165.16	ASPHALT PT & PC
14	919231.05	1036191.84	1155.98	ASPHALT PT
15	919170.90	1036268.17	1149.60	ASPHALT PI
16	919143.41	1036292.77	1147.66	ASPHALT PC
17	919100.02	1036295.37	1145.34	ASPHALT PT (MATCH EXISTING)
18	919182.83	1036358.06	1143.94	ASPHALT PC (MATCH EXISTING)
19	919174.05	1036314.23	1147.02	ASPHALT PT
20	919190.56	1036283.62	1149.10	ASPHALT PI
21	919250.79	1036207.18	1155.48	ASPHALT PC
22	919355.56	1036197.58	1164.66	ASPHALT - GRADE BREAK
23	919364.04	1036206.37	1165.59	ASPHALT PT
24	919367.01	1036210.02	1165.92	ASPHALT - GRADE BREAK
25	919430.01	1036287.68	1171.41	ASPHALT CORNER
26	919388.77	1036160.17		ASPHALT CENTER 25' RADIUS
27	919307.74	1036252.05		ASPHALT CENTER 72.5', 85' & 97.5' RADIUS
28	919120.07	1036266.69		ASPHALT CENTER 35' RADIUS
29	919204.85	1036330.85		ASPHALT CENTER 35' RADIUS
30	919590.59	1036268.15	1172.79	GRAVEL PAD CORNER
31	919536.40	1036201.36	1172.79	GRAVEL PAD CORNER
32	919428.46	1036288.94	1171.39	GRAVEL PAD CORNER
33	919482.65	1036355.73	1171.40	GRAVEL PAD CORNER
34	919141.63	1036325.52	1145.10	ACCESS ROAD CL - BEGINNING
35	919158.89	1036303.61	1147.04	ACCESS ROAD CL - GRADE BREAK
36	919180.73	1036275.90	1149.35	ACCESS ROAD CL - GRADE BREAK
37	919240.87	1036199.58	1155.73	ACCESS ROAD CL - PC
38	919306.77	1036115.94		ACCESS ROAD CL - PI
39	919363.79	1036188.38	1164.91	ACCESS ROAD CL - GRADE BREAK
40	919373.75	1036198.49	1165.74	ACCESS ROAD CL - PT
100	919596.04	1036263.76	1170.79	DITCH CL - BEGINNING
101	919543.91	1036195.41	1169.93	DITCH CL - PI
102	919477.31	1036117.69	1165.16	DITCH CL - PC
103	919466.64	1036115.49	1164.68	DITCH CL - PT
104	919379.46	1036169.98	1159.92	DITCH CL - PI
105	919361.61	1036160.38	1161.99	DITCH CL - BEGINNING
106	919224.00	1036186.24	1153.88	DITCH CL - PT
107	919159.10	1036257.08	1145.11	DITCH CL - PI
108	919130.13	1036277.87	1141.88	DITCH CL - PI
109	919110.91	1036281.14	1142.04	DITCH CL - PI
110	919594.07	1036272.40	1171.29	DITCH CL - BEGINNING
111	919488.67	1036363.10	1168.56	DITCH CL - DAYLIGHT
112	919467.91	1036367.72	1165.40	DITCH CL - BEGINNING
113	919412.08	1036302.16	1164.71	DITCH CL - PI
114	919358.27	1036212.36	1163.90	CATCH BASIN INLET & DITCH CL END
115	919347.69	1036203.70	1162.15	DITCH CL - BEGINNING
116	919258.97	1036213.84	1152.86	DITCH CL - PT
117	919203.80	1036293.83	1144.43	DITCH CL - PI
118	919185.43	1036337.29	1140.46	DITCH CL - INTERSECTION
119	919086.64	1036276.55	1144.00	DITCH CL - DAYLIGHT
120	919250.71	1036395.34	1140.28	DITCH CL - END
121	919588.70	1036092.46	1195.98	BENCH SWALE CL - PI
122	919553.67	1036051.57	1194.37	BENCH SWALE CL - PC
123	919438.26	1036018.44	1193.10	BENCH SWALE CL - PT
124	919430.72	1036037.41	1193.00	BENCH SWALE CL - DAYLIGHT

POINT TABLE

PNT	NORTHING	EASTING	ELEV.	DESCRIPTION
125	919581.11	1036098.97	1197.65	BENCH TOP - DAYLIGHT
126	919546.23	1036058.26	1195.16	BENCH TOP - PC
127	919441.19	1036028.00	1194.77	BENCH TOP - END
128	919368.93	1036163.87	1164.41	TOP OF BERM
129	919353.36	1036209.88	1165.25	TOP OF BERM
130	919593.40	1036132.85	1194.58	BENCH TOP - END
131	919108.65	1036299.77	1145.30	FLOWLINE CONCRETE CHANNEL
132	919112.80	1036300.92	1145.36	ASPHALT /CONCRETE CHANNEL - PT
133	919143.45	1036323.12	1145.10	ASPHALT /CONCRETE CHANNEL - PI
134	919173.89	1036347.17	1144.05	ASPHALT /CONCRETE CHANNEL - PT
135	919142.54	1036324.32	1145.04	FLOWLINE CONCRETE CHANNEL
136	919176.13	1036350.85	1143.99	FLOWLINE CONCRETE CHANNEL

GRADING PLAN NOTES:

1. REFER TO SHEET NPTT102-G001 FOR ADDITIONAL GENERAL NOTES, ABBREVIATIONS, AND LEGENDS.
2. REFER TO SHEET NPTT109-C300 FOR GRADING CROSS SECTIONS.
3. NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM
   HORIZONTAL DATUM - NAD83
   VERTICAL DATUM - NAVD88
4. PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATED REFER TO TOP OF FINISH SURFACE.
5. ALL FILL AND CUT SLOPES ARE 3-FT HORIZONTAL TO 1-FT VERTICAL (3:1) UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL PLACE 4" TOPSOIL AND SEED ON ALL CUT AND FILL SLOPES AS SPECIFIED UNLESS ANOTHER SURFACE MATERIAL IS INDICATED. EROSION CONTROL BLANKETS (NORTH AMERICAN GREEN SC250 OR ENGINEER APPROVED EQUAL) SHALL BE PLACED OVER ALL SEEDED SIDE SLOPES.
7. AFTER COMPLETION OF YARD SUBGRADE WORK, THE SURFACE COURSE FOR THE SUBSTATION (INSIDE THE FENCE, 5-FT OUTSIDE THE FENCE, AND WHERE INDICATED ON THE PLANS) SHALL CONSISTS OF A 4-INCH LAYER OF CRUSHED BASALT (ANGULAR STONE) STONE MEETING THE GRADATION REQUIREMENTS EXPLAINED IN THE SPECIFICATIONS.
8. CONTRACTOR SHALL PROTECT/REPAIR ALL SLOPES UNTIL FINAL VEGETATIVE OR STONE STABILIZATION.
9. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED AND STABILIZED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS.
10. STABILIZE ALL DITCHES, SWALES, AND PONDS PRIOR TO DIRECTING STORMWATER RUNOFF TO THEM.
11. TURF REINFORCEMENT MAT (TRM) SHALL BE INSTALLED ON ALL 3-FT HORIZONTAL TO 1-FT VERTICAL SLOPES (3:1) OR STEEPER, AND BE NORTH AMERICAN GREEN SC250 OR APPROVED EQUAL.
12. EARTHWORK AND COMPACTION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL ENGINEERING REPORT BY OTHERS.

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Oct 5 2015

0 30' 60'
SCALE IN FEET

NORTH

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

NO.	ISSUED FOR	DATE	DRWN	CHKD	APPRV.
1	PERMITTING	10/1/15	JJS	RLR	BSS

THE NORTHERN PASS
Transmission Business

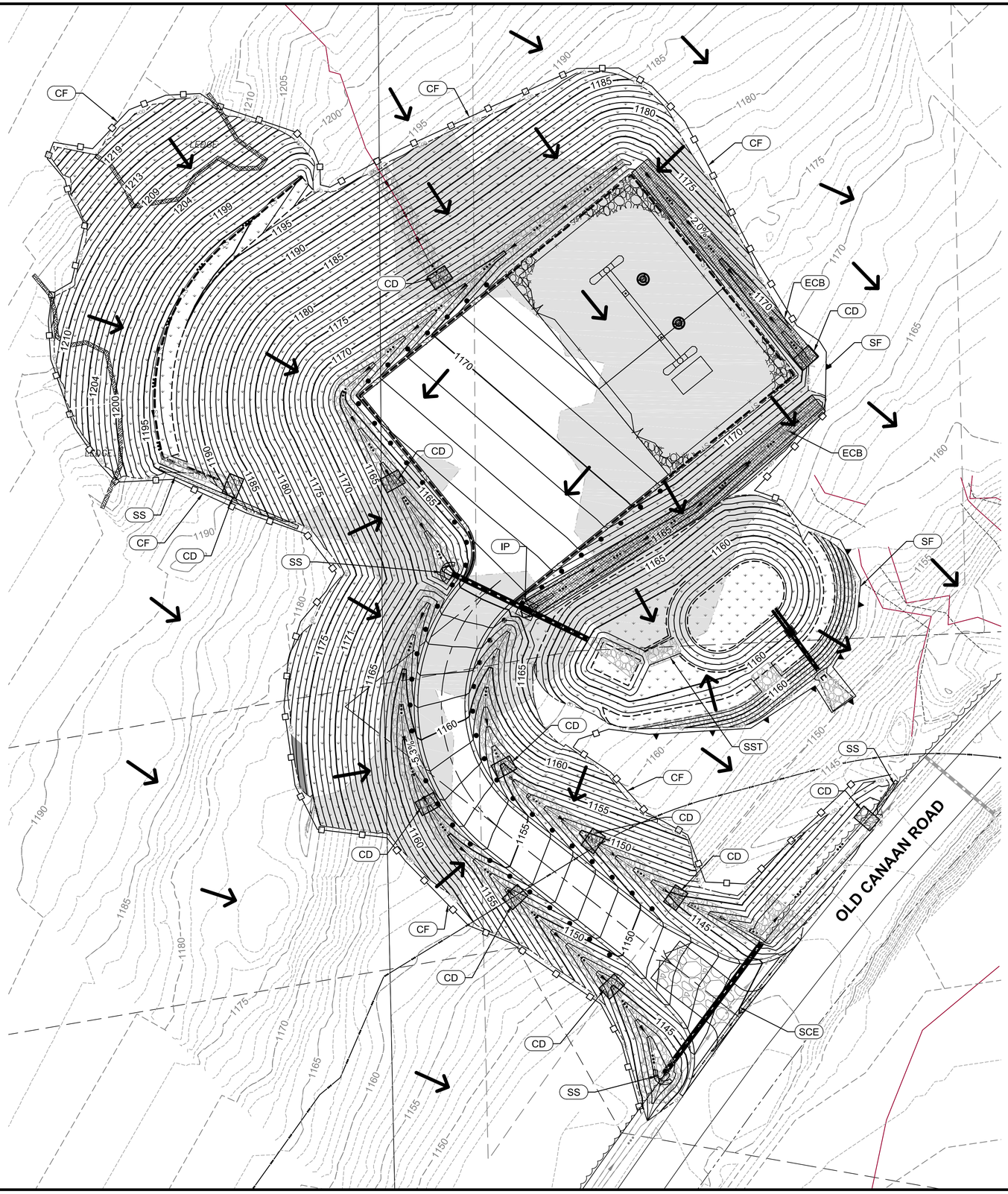
TRANSITION STATION #1
GRADING PLAN

DATE: 10/1/2015
SCALE: 1" = 30'

DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN: 93 DIMMIK ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 4 OF 19
NPTT104-C101

REVISION: XXX



SEDIMENT & EROSION CONTROL LEGEND

- FLOW ARROW
- 1 / C503 — CONSTRUCTION FENCE (CF)
- 2 / C501 — STONE CHECK DAM (CD)
- 5 / C501 — EROSION CONTROL BLANKET (ECB)
- 5 / C502 — INLET PROTECTION (IP)
- 4 / C501 — SILT SOCK (SS)
- 3 / C501 — SILT FENCE (SF)
- 1 / C501 — STABLIZED CONSTRUCTION ENTRANCE (SCE)
- 2 / C502 — STONE OUTLET SEDIMENT TRAP (SST)

NOTES:

1. REFER TO SHEET NPTT110-C500 FOR EROSION AND SEDIMENTATION NOTES.
2. TOTAL LIMIT OF DISTURBANCE - 132,193 SF = 3.04 ACRES.

STATE OF NEW HAMPSHIRE — BRIAN R. SAKIOWICH — No. 14328 — LICENSED PROFESSIONAL ENGINEER

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NO.	REVISION	DATE	DRAWN	CHKD	APPRV.
1	ISSUED FOR PERMITTING	10/1/15	JJS	RLR	BSS

THE NORTHERN PASS

Transmission Business

TRANSITION STATION #1
EROSION AND SEDIMENTATION CONTROL PLAN

DATE: 10/1/2015
SCALE: 1" = 30'

DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN: OLD CANAAN ROAD, PITTSBURG, NH

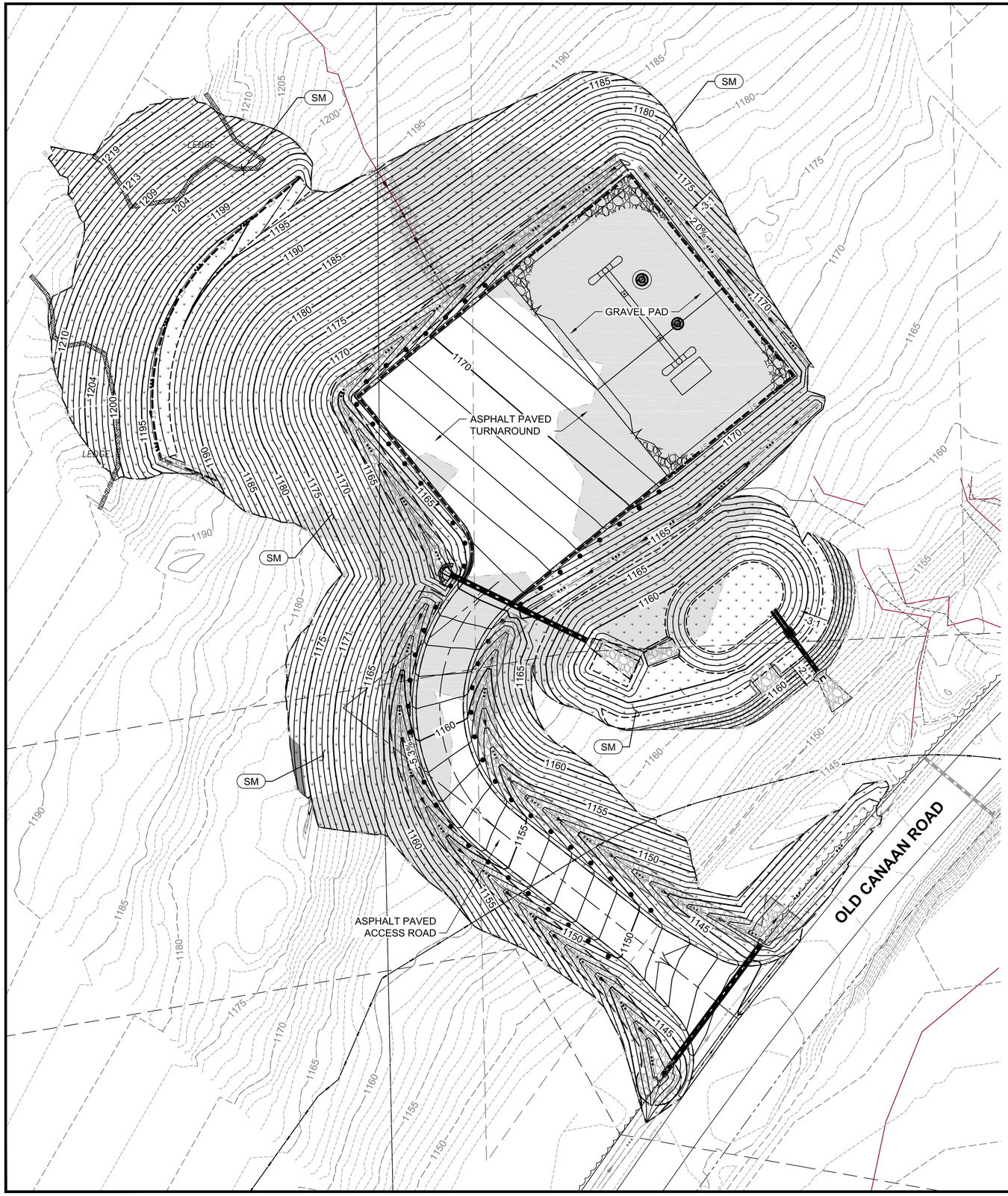
TRANSMISSION LINE:

MILE NO:

SHEET 5 OF 19

NPTT105-C102

REVISION: XXX



PLANTING PLAN NOTES:

1. REFER TO SHEET NPTT102-G001 FOR ADDITIONAL GENERAL NOTES, ABBREVIATIONS, AND LEGENDS.

2. THIS DRAWING IS INTENDED TO DESCRIBE LANDSCAPE INFORMATION ONLY.

3. ALL DISTURBED AREAS NOT OTHERWISE DEVELOPED SHALL HAVE A MINIMUM OF 4" OF LOAM AND THE FOLLOWING SEED MIXTURE:
   NHDOT TYPE 44 (MIN. 80 LBS/ACRE):
   44% CREEPING RED FESCUE (MIN. 35 LBS/ACRE)
   38% PERENNIAL RYEGRASS (MIN. 30 LBS/ACRE)
   6% REDTOP (MIN. 5 LBS/ACRE)
   6% ALSIKE CLOVER (MIN. 5 LBS/ACRE)
   6% BIRDSFOOT TREFOIL (MIN. 5 LBS/ACRE)
   ALL SEEDING SHALL BE IN ACCORDANCE WITH THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (2010) SECTION 644 -- GRASS SEED AND THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES STORMWATER MANUAL VOLUME 3 PERMANENT VEGETATION IN SECTION 4.1.

4. NO SEEDING SHALL BE PLACED BEFORE ROUGH GRADING HAS BEEN PROPERLY COMPLETED.

5. TOPSOIL SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4". CONTRACTOR SHALL SUBMIT SAMPLES FROM EACH PROPOSED TOPSOIL SOURCE TO A CERTIFIED TESTING LABORATORY TO DETERMINE pH, FERTILITY, ORGANIC CONTENT AND MECHANICAL COMPOSITION. CONTRACTOR SHALL SUBMIT THE TEST RESULTS TO OWNER OR LANDSCAPE ARCHITECT FOR REVIEW. CONTRACTOR SHALL INCORPORATE AMENDMENTS FOR PROPER SOIL pH AND PLANT GROWTH AS RECOMMENDED BY TEST REPORTS AT NO INCREASE IN CONTRACT PRICE.

6. TEMPORARY AND PERMANENT SEEDING SHALL SHALL BE IN ACCORDANCE WITH THE PLANTING PLAN, NH DES STORMWATER MANUAL VOLUME 3, AND NH DOT STANDARD SPECIFICATIONS SECTION 644.

7. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES -- 6 TO 12 INCHES ON COMPACTED SOILS -- PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4 INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING.

8. PLACING LOAM ON SITE: ALL SUBGRADE ELEVATIONS SHOULD BE UNIFORMLY GRADED TO RECEIVE LOAM AND SHALL BE INSPECTED AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO PLACEMENT OF LOAM. PLACE LOAM TO FORM A MINIMUM DEPTH OF 4" WHEN ROLLED, UNLESS OTHERWISE INDICATED. ALL DEPRESSIONS EXPOSED DURING THE ROLLING SHALL BE FILLED WITH ADDITIONAL LOAM.

9. SEED BED PREPARATION: AFTER FINISH GRADING AND JUST BEFORE SEEDING, THE AREAS TO BE SEEDED SHALL BE LOOSENED TO PROVIDE A ROUGH, FIRM BUT FINELY PULVERIZED SEEDBED. THE INTENT IS A TEXTURE CAPABLE OF RETAINING WATER, SEED AND FERTILIZER WHILE REMAINING STABLE AND ALLOWING SEED TIME TO GERMINATE. SEED SHALL BE APPLIED TO THE CONDITIONED SEEDBED NOT MORE THAN 48 HOURS AFTER THE SEEDBED HAS BEEN PREPARED.

10. LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE SOIL PRIOR TO OR AT THE TIME OF AT THE TIME OF SEEDING. A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS. PER ACRE OF 10-20-20 FERTILIZER SHALL BE APPLIED. SEEDING PRACTICES SHALL COMPLY WITH LOCAL USDA SOIL CONSERVATION SERVICES RECOMMENDATIONS.

11. STRAW MULCH OR JUTE MATTING SHALL BE USED WHERE INDICATED ON THE PLANS. A MINIMUM OF 1.5 TONS OF MULCH PER ACRE SHALL BE APPLIED. MULCH SHALL BE ANCHORED IN PLACE WHERE NECESSARY. JUTE MATTING SHALL BE LAID IN THE DIRECTION OF RUNOFF FLOW AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

12. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS AREA NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 15 TO SEPTEMBER 15. NO DISTURBED AREA SHALL BE LEFT EXPOSED DURING WINTER MONTHS.

PLANTING LEGEND

SEEDING & MULCHING (SM)

AREA TO BE SEEDED = 2.0 ACRES

STATE OF NEW HAMPSHIRE
BRIAN R. SANDOWICH
No. 14326
LICENSED PROFESSIONAL ENGINEER

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Oct 5 2015

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NORTH

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NO.	REVISION	DATE	DRWN	CHKD	APPRV
1	ISSUED FOR PERMITTING	10/1/15	JJS	RLR	BSS

Transmission Business

TRANSITION STATION #1
PLANTING PLAN

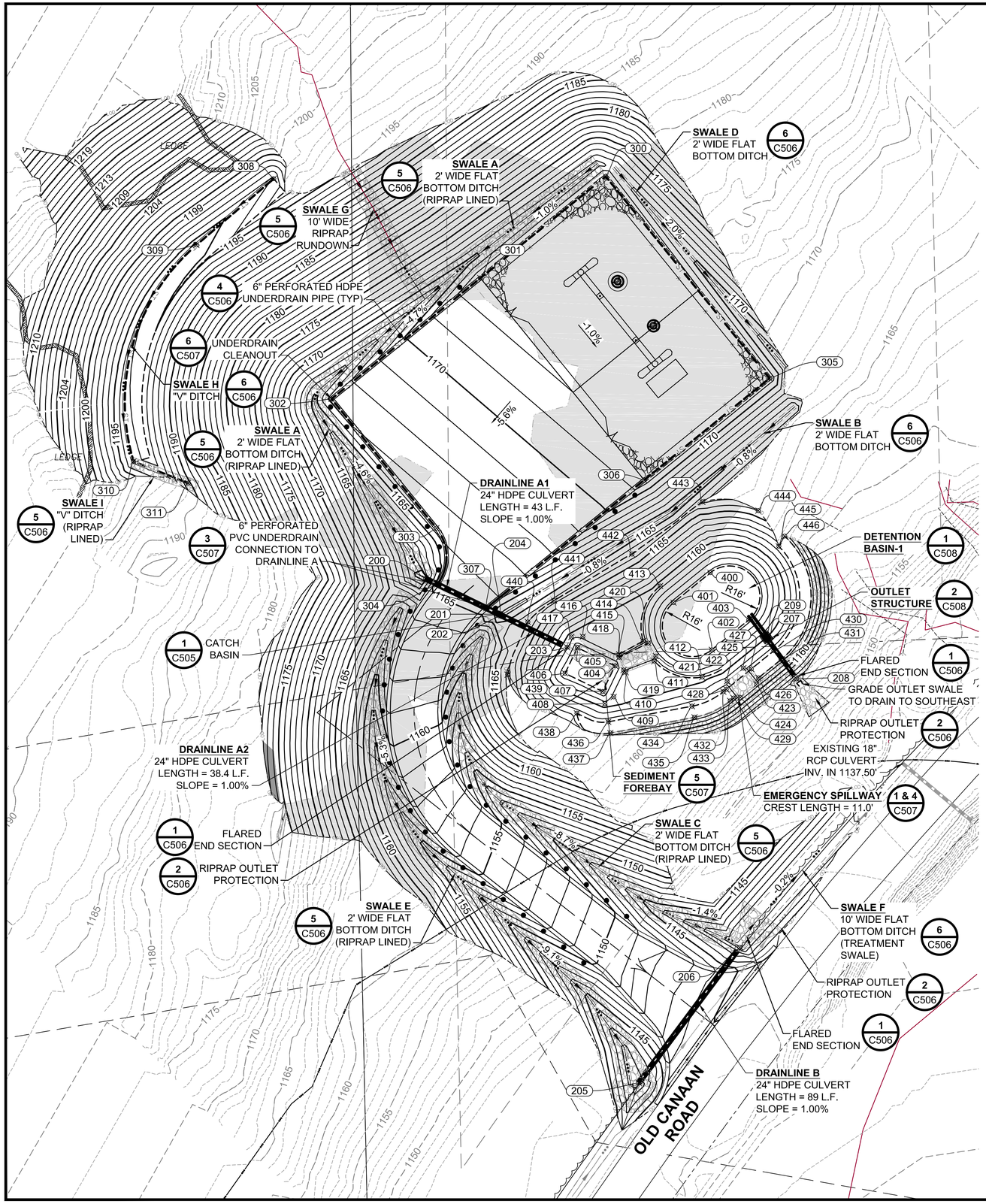
DATE: 10/1/2015
SCALE: 1" = 30'

DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN: OLD CANAAN ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 6 OF 19

NPTT106-C103

REVISION: XXX



POINT TABLE

PNT	NORTHING	EASTING	ELEV.	DESCRIPTION
200	919377.34	1036172.99	1159.92	DRAINLINE A1 - 24" HDPE PIPE INVERT IN
201	919358.59	1036211.69	1159.49	DRAINLINE A1 - 24" HDPE PIPE INVERT OUT
202	919357.90	1036213.12	1159.24	DRAINLINE A2 - 24" HDPE PIPE INVERT IN
203	919341.15	1036247.69	1158.86	DRAINLINE A2 - 24" HDPE PIPE INVERT OUT (FES)
204	919358.27	1036212.36	1163.90	DRAINLINE A - GRATE FOR CATCH BASIN (TYPE E GRATE)
205	919111.76	1036285.41	1141.35	DRAINLINE B - 24" HDPE PIPE INVERT IN
206	919183.12	1036338.59	1140.46	DRAINLINE B - 24" HDPE PIPE INVERT OUT (FES)
207	919344.64	1036353.85	1155.50	POND OUTLET PIPE - 18" HDPE PIPE INVERT IN
208	919324.44	1036368.58	1155.25	POND OUTLET PIPE - 18" HDPE PIPE INVERT OUT (FES)
209	919346.40	1036352.57	1160.77	POND OUTLET STRUCTURE - GRATE ELEVATION
300	919589.18	1036268.00	1170.12	6" UNDERDRAIN INVERT - PI
301	919535.62	1036202.00	1169.27	6" UNDERDRAIN INVERT - PI
302	919471.99	1036123.56	1164.55	6" UNDERDRAIN INVERT - PI (INSTALL CLEANOUT)
303	919403.89	1036178.81	1163.67	6" UNDERDRAIN INVERT - PC
304	919374.28	1036179.31	1162.68	6" UNDERDRAIN INVERT - OUTLET
305	919482.78	1036354.31	1168.75	6" UNDERDRAIN INVERT - PI
306	919429.23	1036288.32	1167.89	6" UNDERDRAIN INVERT - GRADE BREAK
307	919361.74	1036205.18	1162.86	6" UNDERDRAIN INVERT - OUTLET
308	919587.94	1036093.11	1193.64	6" UNDERDRAIN INVERT - BEGIN
309	919553.04	1036052.38	1191.96	6" UNDERDRAIN INVERT - PC
310	919439.01	1036019.26	1190.70	6" UNDERDRAIN INVERT - PT
311	919427.61	1036047.95	1190.38	6" UNDERDRAIN INVERT - OUTLET
400	919380.42	1036323.18	1155.61	BOTTOM OF DETENTION POND - PT
401	919364.67	1036303.76	1155.61	BOTTOM OF DETENTION POND - PC
402	919339.82	1036323.92	1155.61	BOTTOM OF DETENTION POND - PT
403	919355.57	1036343.34	1155.61	BOTTOM OF DETENTION POND - PC
404	919331.33	1036272.93	1157.19	BOTTOM OF SEDIMENT FOREBAY - PI
405	919340.92	1036253.13	1157.19	BOTTOM OF SEDIMENT FOREBAY - PI
406	919327.42	1036246.59	1157.19	BOTTOM OF SEDIMENT FOREBAY - PI
407	919317.83	1036266.39	1157.19	BOTTOM OF SEDIMENT FOREBAY - PI
408	919311.44	1036267.57	1159.36	TOP OF SEDIMENT FOREBAY SLOPE - PC
409	919315.00	1036272.24	1159.36	TOP OF SEDIMENT FOREBAY SLOPE - PT
410	919327.97	1036278.52	1159.36	TOP OF WEIR - PI
411	919333.78	1036293.63	1159.36	TOP OF WEIR - PI
412	919325.45	1036318.83	1159.36	TOP OF WET POOL SLOPE - PC
413	919373.40	1036296.67	1159.36	TOP OF WET POOL SLOPE - PC
414	919344.43	1036287.74	1159.36	TOP OF WEIR - PI
415	919337.52	1036275.07	1159.36	TOP OF WEIR - PI
416	919346.77	1036255.97	1159.36	TOP OF SEDIMENT FOREBAY SLOPE - PC
417	919346.57	1036249.91	1159.36	TOP OF SEDIMENT FOREBAY SLOPE - PT
418	919335.83	1036275.11	1158.86	BOTTOM OF WEIR SLOPE - PI
419	919329.15	1036277.43	1158.86	BOTTOM OF WEIR SLOPE - PI
420	919343.36	1036290.48	1158.61	BOTTOM OF WEIR SLOPE - PI
421	919336.49	1036294.43	1158.61	BOTTOM OF WEIR SLOPE - PI
422	919323.22	1036331.99	1161.60	BOTTOM OF SPILLWAY SLOPE - PI
423	919321.61	1036347.46	1161.60	BOTTOM OF SPILLWAY SLOPE - PI
424	919314.68	1036338.92	1161.60	BOTTOM OF SPILLWAY SLOPE - PI
425	919330.15	1036340.53	1161.60	BOTTOM OF SPILLWAY SLOPE - PI
426	919325.05	1036348.53	1162.60	TOP OF SPILLWAY SLOPE / BERM - PI
427	919329.71	1036344.75	1162.60	TOP OF SPILLWAY SLOPE / BERM - PI
428	919319.00	1036331.55	1162.60	TOP OF SPILLWAY SLOPE / BERM - PI
429	919314.34	1036335.33	1162.60	TOP OF SPILLWAY SLOPE / BERM - PI
430	919339.28	1036356.55	1162.60	TOP OF BERM - PT
431	919334.63	1036360.33	1162.60	TOP OF BERM - PT
432	919317.74	1036329.99	1162.60	TOP OF BERM - PC
433	919312.92	1036333.58	1162.60	TOP OF BERM - PC
434	919310.10	1036313.45	1162.60	TOP OF BERM - PT
435	919304.24	1036314.80	1162.60	TOP OF BERM - PT
436	919301.89	1036269.36	1162.60	TOP OF BERM - PC
437	919295.99	1036270.46	1162.60	TOP OF BERM - PC
438	919306.39	1036252.82	1162.60	TOP OF BERM - PT
439	919326.68	1036216.34	1167.23	GRADE BREAK AT TOP OF POND SLOPE
440	919354.49	1036226.98	1167.01	GRADE BREAK AT TOP OF POND SLOPE
441	919365.71	1036240.78	1166.41	GRADE BREAK AT TOP OF POND SLOPE
442	919390.25	1036281.82	1166.73	GRADE BREAK AT TOP OF POND SLOPE
443	919417.72	1036318.94	1167.27	GRADE BREAK AT TOP OF POND SLOPE
444	919413.13	1036348.40	1166.00	TOP OF POND SLOPE (MATCH EXISTING)
445	919394.33	1036359.21	1162.60	TOP OF BERM (MATCH EXISTING)
446	919399.68	1036362.28	1162.60	TOP OF BERM (MATCH EXISTING)

STORMWATER SYSTEM PLAN NOTES:

1. REFER TO SHEET NPTT102-G001 FOR ADDITIONAL GENERAL NOTES, ABBREVIATIONS, AND LEGENDS.
2. THIS DRAWING IS INTENDED TO DESCRIBE THE STORMWATER SYSTEM ONLY.
3. NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM
   HORIZONTAL DATUM - NAD83
   VERTICAL DATUM - NAVD88
4. STORM DRAINAGE SYSTEM CONNECTIONS, MATERIALS, AND METHODS SHALL BE IN ACCORDANCE WITH THE NH DOT STANDARDS AND NH DOT SPECIFICATION SECTIONS 603 AND 604, AS WELL AS OTHER APPLICABLE INDUSTRY CODES AND GOVERNING AGENCY REQUIREMENTS.
5. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE PROPOSED STORM PIPING WILL CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT THE ENGINEER IN THE EVENT OF ANY DISCOVERED OR UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED SANITARY SEWERS, STORM PIPING AND UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
6. MANHOLE RIMS AND CATCH BASIN GRATES SHALL BE SET TO ELEVATIONS SHOWN. SET ALL EXISTING MANHOLE RIMS, GRATES AND OTHER UTILITY TOPS TO BE RAISED OR LOWERED FLUSH WITH FINAL GRADE AS NECESSARY.
7. THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH APPLICABLE REGULATORY AGENCIES FOR STORM DRAINAGE INSTALLATIONS AND CONNECTIONS.
8. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY PROVIDERS AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTIONS, RELOCATIONS, INSPECTIONS, AND DEMOLITION UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATIONS MANUAL AND/OR GENERAL CONDITIONS OF THE CONTRACT.
9. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
10. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION FOR APPROVAL PRIOR TO BACKFILLING, IN ACCORDANCE WITH THE APPROPRIATE OWNER, UTILITY PROVIDER, AND APPLICABLE REGULATORY AGENCY REQUIREMENTS.
11. A ONE-FOOT MINIMUM VERTICAL CLEARANCE BETWEEN ELECTRICAL AND TELEPHONE LINES TO STORM PIPING SHALL BE PROVIDED.
12. SITE CONTRACTOR SHALL PROVIDE ALL BENDS, FITTINGS, ADAPTERS, ETC., AS REQUIRED FOR PIPE CONNECTIONS.
13. THE CONTRACTOR SHALL MAINTAIN ALL FLOWS AND UTILITY CONNECTIONS WITHOUT INTERRUPTION UNLESS/UNTIL AUTHORIZED BY THE OWNER, THE ENGINEER, UTILITY PROVIDERS AND GOVERNING AUTHORITIES.
14. STORM DRAINAGE SHALL BE RATED FOR HS-20 LOADING.
15. PROVIDE MINIMUM 1% SLOPE ON ALL UNDERDRAINS. ADDITIONAL UNDERDRAINS MAY BE REQUIRED AS DEEMED NECESSARY BY THE OWNER, GEOTECHNICAL ENGINEER AND/OR ENGINEER BASED ON FINDINGS AFTER EARTHWORK AND EXCAVATION OPERATIONS COMMENCE. PROVIDE UNDERDRAIN CLEANOUTS AT A MINIMUM OF EVERY 200' OF PIPE OR ONE CLEANOUT PER PIPE RUN WHERE THE PIPE RUN IS LESS THAN 200'.

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Oct 5 2015

0 30' 60'
SCALE IN FEET

NORTH

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

NO.	REVISION	DATE	DRWN	CHKD	APPRV
1	ISSUED FOR PERMITTING	10/1/15	JJS	RLR	BSS

THE NORTHERN PASS
Transmission Business

TRANSITION STATION #1
STORMWATER SYSTEM PLAN

DATE: 10/1/2015
SCALE: 1" = 30'

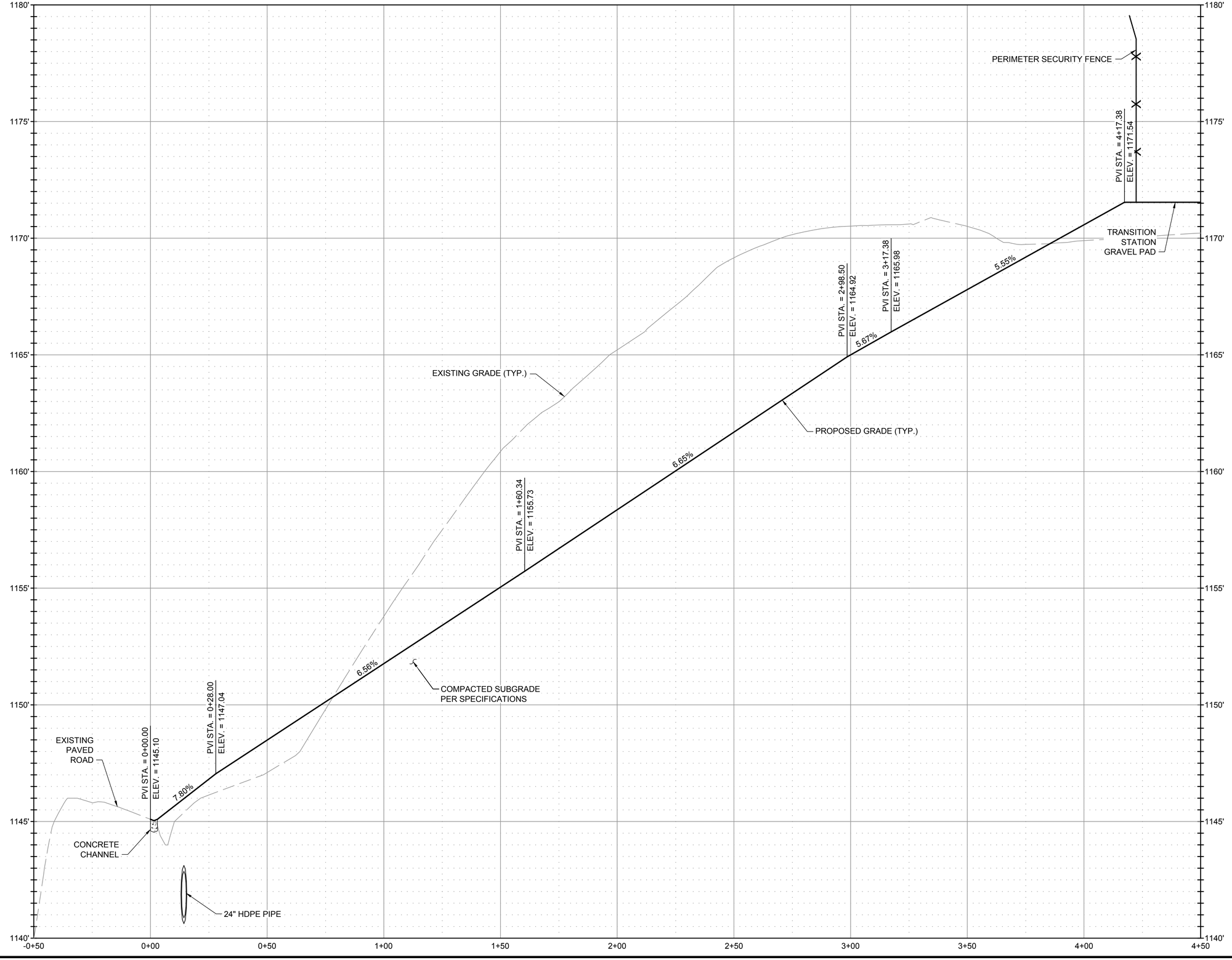
DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN: 92 DAWN ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 7 OF 19

NPTT107-C104

REVISION: XXX

ACCESS ROAD PROFILE



ACCESS ROAD PROFILE NOTES:

1. REFER TO SHEET NPTT102-G001 FOR ADDITIONAL GENERAL NOTES, ABBREVIATIONS, AND LEGENDS.
2. THIS DRAWING IS INTENDED TO DESCRIBE THE STATION ACCESS ROAD GEOMETRY ONLY.
3. NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM
   HORIZONTAL DATUM - NAD83
   VERTICAL DATUM - NAVD88
4. PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATED REFER TO TOP OF FINISH SURFACE.

HORIZONTAL
0 10' 20' 40'
SCALE IN FEET

VERTICAL
0 2' 4'
SCALE IN FEET

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Oct 5 2015

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

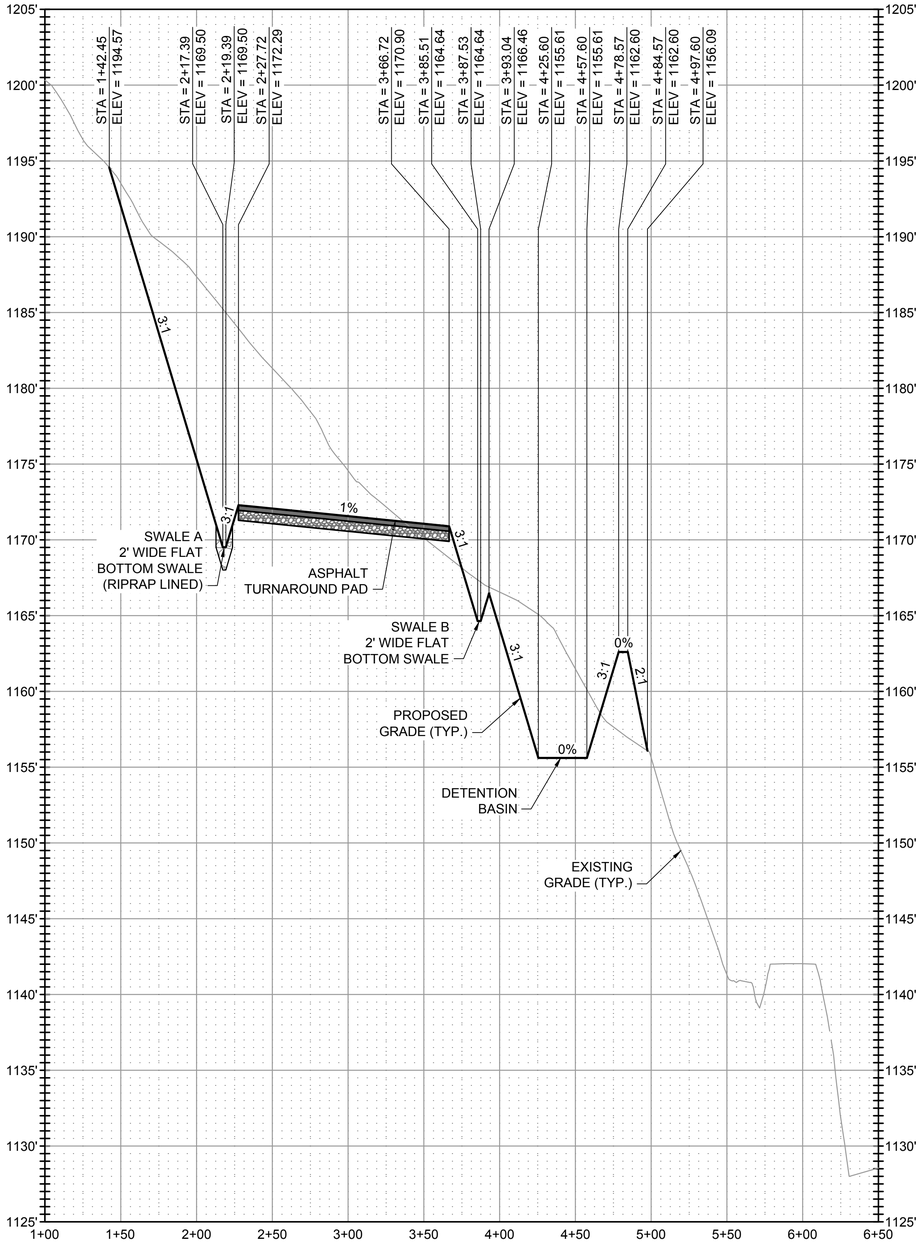
NO.	REVISION	DATE	DRWN	CHKD	APPRV.
1	ISSUED FOR PERMITTING	10/1/15	JJS	RLR	BSS

THE NORTHERN PASS
Transmission Business

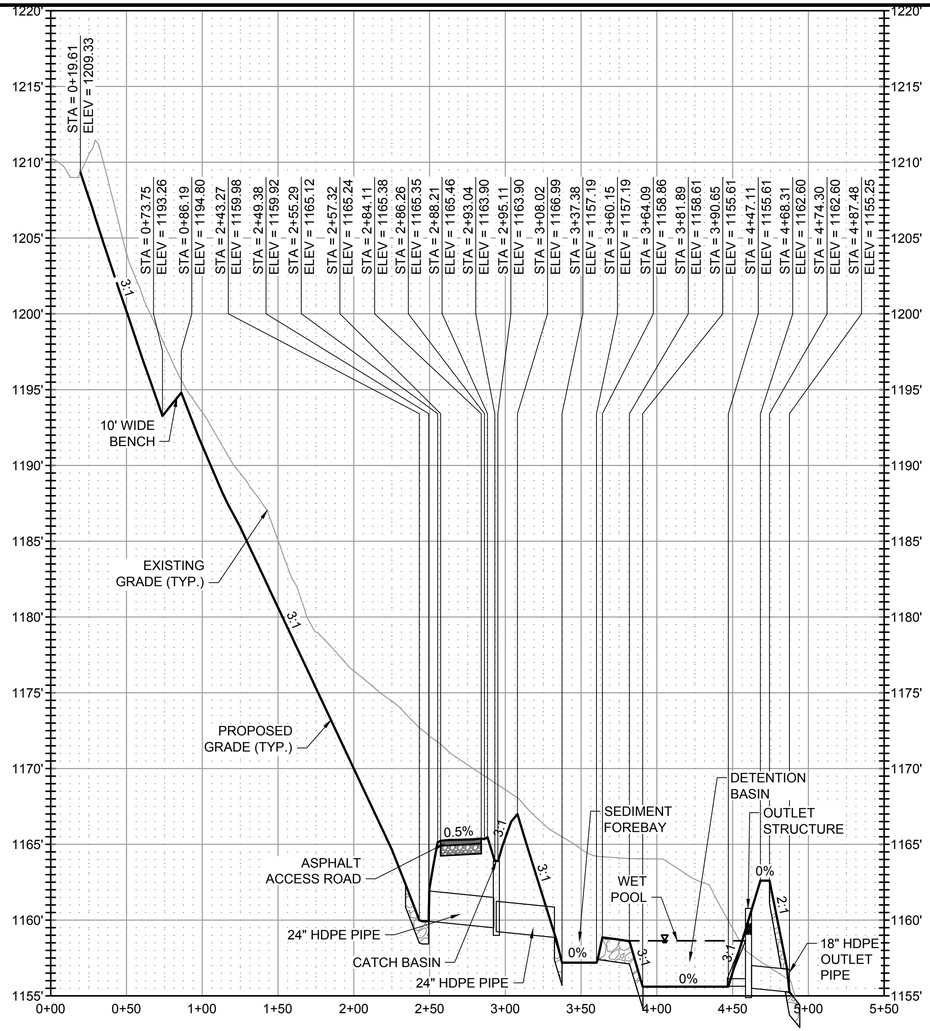
TRANSITION STATION #1
ACCESS ROAD PROFILE

DATE: 10/1/2015
SCALE: AS NOTED

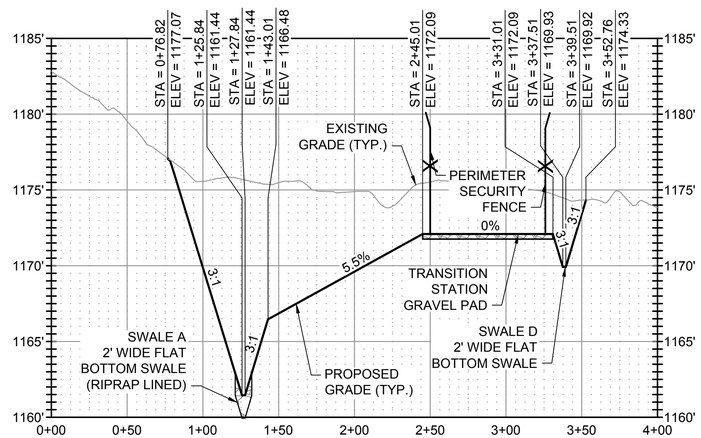
DES: JJS | CHK: RLR
DRW: JJS | APR: BSS
TOWN:
OLD DIXVILLE ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 8 OF 19
NPTT108-C200
REVISION: XXX



CROSS SECTION A-A



CROSS SECTION C-C



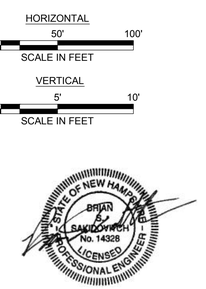
CROSS SECTION B-B

GRADING CROSS SECTION NOTES:

1. REFER TO SHEET NPTT102-G001 FOR ADDITIONAL GENERAL NOTES, ABBREVIATIONS, AND LEGENDS.
2. THIS DRAWING IS INTENDED TO DESCRIBE THE GRADING CROSS SECTIONS ONLY.
3. NEW HAMPSHIRE STATE PLANE COORDINATE SYSTEM
   HORIZONTAL DATUM - NAD83
   VERTICAL DATUM - NAVD88
4. PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATED REFER TO TOP OF FINISH SURFACE.
5. CONTRACTOR SHALL PLACE 4" TOPSOIL AND SEED ON ALL CUT AND FILL SLOPES AS SPECIFIED UNLESS ANOTHER SURFACE MATERIAL IS INDIC
6. EARTHWORK AND COMPACTION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS MADE IN THE GEOTECHNICAL ENGINEERING RECOMMENDATIONS REPORT BY OTHERS.
7. STRIP AND STOCKPILE EXISTING TOPSOIL IN AREAS OF PROPOSED GRADING AND EARTHWORK.

HORIZONTAL
0 50' 100'
SCALE IN FEET

VERTICAL
0 5' 10'
SCALE IN FEET



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Oct 5 2015

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

NO.	REVISION	DATE	DRWN	CHKD	APPRV
1	ISSUED FOR PERMITTING	10/1/15	JJS	RLR	BSS

THE NORTHERN PASS
Transmission Business

TRANSITION STATION #1
SITE CROSS SECTIONS

DATE: 10/1/2015
SCALE: AS NOTED

DES: JJS | CHK: RLR
DRW: JJS | APR: BSS
TOWN: OLD CANAAN ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 9 OF 19
NPTT109-C300
REVISION: XXX

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EROSION AND SEDIMENTATION CONTROL GENERAL NOTES:

1. THE SEDIMENT AND EROSION CONTROL PLAN IS ONLY INTENDED TO DESCRIBE THE SEDIMENT AND EROSION CONTROL TREATMENT FOR THIS SITE. SEE SEDIMENT AND EROSION CONTROL DETAILS AND CONSTRUCTION SEQUENCE. REFER TO SITE PLAN FOR GENERAL INFORMATION AND OTHER CONTRACT PLANS FOR APPROPRIATE INFORMATION.

2. CONSTRUCTION ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE GENERAL NOTES, SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING BY THE OWNER, QUALIFIED PROFESSIONAL, AND APPROPRIATE REGULATORY AGENCY PRIOR TO IMPLEMENTATION.

3. THE EROSION AND SEDIMENTATION CONTROL MEASURES, CONSTRUCTION SEQUENCE AND PHASING IS THE MINIMUM RECOMMENDED. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ADDITIONAL MEASURES AND SEQUENCING AS REQUIRED BASED ON ACTUAL FIELD OPERATIONS AND CONDITIONS AND BE CONSISTENT WITH THE NEW HAMPSHIRE STORMWATER MANUAL. SIGNIFICANT ADDITIONS AND/OR MODIFICATIONS FROM THE PLANS SHALL BE SUBMITTED, REVIEWED AND APPROVED BY THE OWNER, QUALIFIED PROFESSIONAL AND APPLICABLE REGULATORY AGENCIES.

4. THE SEDIMENT AND EROSION CONTROL PLAN WAS DEVELOPED TO HELP PROTECT THE EXISTING ROADWAY AND STORM DRAINAGE SYSTEMS, ADJACENT PROPERTIES, AND ADJACENT WETLAND AREA FROM SEDIMENT LADEN SURFACE RUNOFF AND EROSION.

5. APPROPRIATE EROSION/SEDIMENT CONTROL MEASURES AS DESCRIBED HEREIN, SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF ALL CLEARING, DEMOLITION AND CONSTRUCTION ACTIVITY WITHIN THE APPROVED LIMITS OF DISTURBANCE. SCHEDULE WORK TO MINIMIZE THE LENGTH OF TIME THAT BARE SOIL WILL BE EXPOSED. CONTRACTOR SHALL ONLY EXCAVATE AS MUCH UTILITY AND STORM PIPE TRENCH WORK AS CAN BE COMPLETED, BACKFILLED AND STABILIZED IN ONE DAY SO AS TO LIMIT THE AMOUNT OF OPEN, DISTURBED TRENCHING. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.

6. THE CONTRACTOR SHALL INSTALL ALL SPECIFIED EROSION/SEDIMENT CONTROL MEASURES AND WILL BE REQUIRED TO MAINTAIN THEM IN THEIR INTENDED FUNCTIONING CONDITION AND BE IN STRICT CONFORMANCE WITH THE STANDARDS BELOW. THE CONTRACTOR SHALL SUPPLY AND MAINTAIN THESE STANDARDS AND HAVE THEM AVAILABLE ONSITE FOR THE DURATION OF CONSTRUCTION. THE OWNER, AGENTS OF THE REGULATORY AGENCIES AND/OR QUALIFIED PROFESSIONAL SHALL HAVE THE AUTHORITY TO REQUIRE SUPPLEMENTAL MAINTENANCE OR ADDITIONAL MEASURES IF FIELD CONDITIONS ARE ENCOUNTERED BEYOND WHAT WOULD NORMALLY BE ANTICIPATED.
   A. EVERSOURCE BEST MANAGEMENT PRACTICES MANUAL (TO BE FURTHER DEVELOPED).
   B. NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES STORMWATER MANUAL, DECEMBER 2008.

7. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE CONTRACTOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.

8. THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIAL (STRAW BALES, SILT FENCE, JUTE MESH,RIP RAP ETC.) ON-SITE FOR MAINTENANCE AND EMERGENCY REPAIRS.

9. STONE CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED AT START OF CONSTRUCTION AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED.

10. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR USE IN FINAL LANDSCAPING. ALL EARTH STOCKPILES SHALL HAVE STRAW BALES OR SILT FENCE AROUND THE LIMIT OF PILE. PILES SHALL BE TEMPORARILY SEEDED IF PILE IS TO REMAIN IN PLACE FOR MORE THAN 2 MONTHS.

11. COMPLY WITH REQUIREMENTS OF THE EPA FOR NPDES AND RECORD KEEPING.

12. VISUAL SITE INSPECTIONS SHALL BE CONDUCTED WEEKLY, AND AFTER EACH MEASURABLE PRECIPITATION EVENT OF 0.50 INCHES OR GREATER BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL, TO ASCERTAIN THAT THE EROSION AND SEDIMENT CONTROL (E&S) BMPS ARE OPERATIONAL AND EFFECTIVE IN PREVENTING POLLUTION. PROVIDE WRITTEN REPORTS IN ACCORDANCE WITH ANY APPLICABLE OWNER, QUALIFIED PROFESSIONAL, AND/OR REGULATORY AGENCY REQUIREMENTS.

13. STOCKPILES OF EARTH MATERIALS SHALL CONFORM TO SOIL STOCKPILE PRACTICES IN SECTION 4.1 OF THE NH DES STORMWATER MANUAL VOLUME 3.

14. DEWATERING SUMP PITS SHALL BE INSTALLED WHEN WATER COLLECTS DURING DURING EXCAVATION TO TRAP AND FILTER WATER FOR PUMPING INTO A SUITABLE DISCHARGE AREA. A PERFORATED VERTICAL STANDPIPE WRAPPED IN NON-WOVEN FILTER FABRIC IS PLACED IN THE CENTER OF THE PIT TO COLLECT FILTERED WATER WHERE IT IS THEN REMOVED FROM THE SUMP PIT IN AN AUTHORIZED MANNER. UNDER NO CIRCUMSTANCES SHALL DEWATERING DRAINAGE BE DISCHARGED INTO A SANITARY SEWER. CONSTRUCTION DEWATERING SHALL CONFORM TO CONSTRUCTION DEWATERING REQUIREMENTS OF THE NH DES STORMWATER MANUAL VOLUME 3 SECTION 4.2.

15. WATER SHALL BE USED FOR DUST CONTROL IN APPROPRIATE AREAS.

16. ALL REGULATORY AGENCY PERMITS REQUIRED FOR THE SITE SHALL BE OBTAINED PRIOR TO SITE WORK COMMENCES.

17. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.

18. E&S BMPS SHALL REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.

19. MAXIMUM SLOPES SHALL NOT EXCEED 3-FT HORIZONTAL TO 1-FT VERTICAL (3:1), UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL VERIFY SLOPE STABILITY OF ALL SLOPES PRIOR TO CONSTRUCTION. UNSTABLE SLOPES SHALL BE LAID BACK (FLATTENED) UNTIL STABLE OR PROVIDE REINFORCING TO ACHIEVE STABILIZATION. SLOPE BENCHES SHALL BE IN ACCORDANCE WITH THE NHDES STORMWATER MANUAL.

20. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.

21. TEMPORARY AND PERMANENT SEEDING SHALL SHALL BE IN ACCORDANCE WITH THE PLANTING PLAN, NH DES STORMWATER MANUAL VOLUME 3, AND NH DOT STANDARD SPECIFICATIONS SECTION 644.

ALTERATION OF TERRAIN STANDARD NOTES:

1. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

2. PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AS NECESSARY PRIOR TO FURTHER EARTH MOVING OPERATIONS. PREVENTION OF EROSION AND SEDIMENT TRANSPORTATION ISSUES WILL BE FACILITATED BY THE PROMPT EMPLOYMENT OF EFFECTIVE TEMPORARY AND PERMANENT CONTROL DEVICES, AS CONDITIONS WARRANT. ADDITIONAL CONTROL DEVICES THAT ARE DETERMINED NECESSARY, NOT OUTLINED HEREIN, MAY BE INSTALLED BY THE OWNER OR OPERATOR.

3. PONDS AND SWALES SHALL BE INSTALLED EARLY ON IN THE CONSTRUCTION SEQUENCE PRIOR TO ROUGH GRADING THE SITE AND OTHER EARTH MOVING ACTIVITIES.

4. DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.

5. ROADWAYS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

6. CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

7. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL DURING THE LIFE OF THE PROJECT. REMOVE TRAPPED SEDIMENT FROM COLLECTOR DEVICES AS NEEDED.

8. STABLE IS DEFINED AS:
   A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED,
   B. A MINIMUM OF 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED,
   C. A MINIMUM 3-INCHES OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED,
   D. OR EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

9. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.

10. TEMPORARY AND PERMANENT SEEDING SPECIFICATIONS ARE AS NOTED IN THE "VEGETATION MEASURES" SECTION ON THIS SHEET.

11. STANDARD WINTER NOTES:
   A. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
   B. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
   C. AFTER NOVEMBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.

WINTER CONSTRUCTION NOTES:

1. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED AS SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.

2. AN AREA WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE SHALL BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIER.

3. TEMPORARY MULCH SHALL BE APPLIED WITHIN 7 DAYS OF SOIL EXPOSURE OR PRIOR TO ANY STORM EVENT, BUT AFTER EVERY WORKDAY IN AREAS WITHIN 100 FEET FROM A PROTECTED NATURAL RESOURCE.

4. AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE SHALL BE PERMANENTLY MULCHED THE SAME DAY.

5. IN THE EVENT OF A SNOWFALL GREATER THAN 1 INCH (FRESH OR CUMULATIVE), THE SNOW SHALL BE REMOVED FROM THE AREAS DUE TO BE SEEDED AND MULCHED.

6. LOAM SHALL BE FREE OF FROZEN CLUMPS BEFORE IT IS APPLIED.

7. A DITCH THAT WILL BE CONSTRUCTED DURING THE WINTER MUST BE STABILIZED WITH RIPRAP.

8. PERMANENT STABILIZATION CONSISTS OF AT LEAST 85% VEGETATION, PAVEMENT/GRAVEL BASE OR RIPRAP.

9. DO NOT EXPOSE SLOPES OR LEAVE SLOPES EXPOSED OVER THE WINTER OR FOR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY PROTECTED WITH MULCH AND EROSION CONTROLS.

10. APPLY STRAW MULCH AT TWICE THE STANDARD RATE (150 LBS. PER 1,000 SF). THE MULCH MUST BE THICK ENOUGH SUCH THAT THE GROUND SURFACE WILL NOT BE VISIBLE AND MUST BE ANCHORED.

11. USE MULCH AND MULCH NETTING OR AN EROSION CONTROL MULCH BLANKET OR MIX FOR ALL SLOPES GREATER THAN 8% OR OTHER AREAS EXPOSED TO DIRECT WIND.

12. INSTALL AN EROSION CONTROL BLANKET IN ALL DRAINAGE WAYS (BOTTOM AND SIDES) WITH A SLOPE GREATER THAN 3%.

13. SEE THE VEGETATION MEASURES FOR MORE INFORMATION ON SEEDING DATES AND TYPES.

CONSTRUCTION SEQUENCE:

THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED (COORDINATE ALL SITE ACTIVITIES AND CONSTRUCTION SEQUENCE WITH THAT OF THE STATION ELECTRICAL EQUIPMENT, OVERHEAD AND UNDERGROUND TRANSMISSION LINES, AND OTHER STATION RELATED CONSTRUCTION):

1. CONTACT THE OWNER, QUALIFIED PROFESSIONAL, AND REGULATORY AGENT AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF ANY DEMOLITION, CONSTRUCTION OR REGULATED ACTIVITY ON THIS PROJECT SITE.

2. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD AND APPROVED BY THE REGULATORY AGENT PRIOR TO THE START OF WORK ON THE SITE. INSTALL PERIMETER EROSION/SEDIMENT CONTROL MEASURES.

3. CONSTRUCT STONE CONSTRUCTION ENTRANCES/EXITS AND INSTALL INLET PROTECTION FOR CATCH BASINS OR INSTALL SILT SACKS ON CATCH BASIN INLETS LOCATED IN OFF-SITE ROADS. INSTALL SILT FENCE AND OTHER EROSION CONTROL DEVICES INDICATED ON THESE PLANS AT PERIMETER OF PROPOSED SITE DISTURBANCE AND INSTALL ALL EROSION/SEDIMENT CONTROL MEASURES AND TREE PROTECTION INDICATED ON THESE PLANS. INSTALL SEDIMENT BASINS AND SEDIMENT TRAPS IF REQUIRED AT LOW AREAS OF SITE OR AS ORDERED BY THE QUALIFIED PROFESSIONAL OR AS SHOWN ON THESE PLANS.

4. CLEAR AND GRUB SITE. STOCKPILE CHIPS. STOCKPILE TOPSOIL. INSTALL EROSION CONTROLS AT STOCKPILES.

5. COMMENCE INSTALLATION OF STORM DRAINAGE SYSTEM.

6. COMMENCE EARTHWORK. CONSTRUCT FILL SLOPE. INSTALL ADDITIONAL EROSION CONTROLS AS WORK PROGRESSES AND CONTINUE STORM DRAINAGE SYSTEM CONSTRUCTION, TOPSOIL AND SEED SLOPES WHICH HAVE ACHIEVED FINAL SITE GRADING.

7. CONSTRUCTION STAKING OF ALL FOUNDATION CORNERS, UTILITIES, ACCESS DRIVES, FENCES AND OTHER SITE APPURTENANCES.

8. ROUGH GRADING AND FILLING OF SUBGRADES AND SLOPES.

9. BEFORE DISPOSING OF SOIL OR RECEIVING BORROW FOR THE SITE, THE CONTRACTOR MUST PROVIDE EVIDENCE THAT EACH SPOIL OR BORROW AREA HAS AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE APPROPRIATE REGULATORY AGENCIES AND WHICH IS BEING IMPLEMENTED AND MAINTAINED. THE CONTRACTOR SHALL ALSO NOTIFY THE APPROPRIATE REGULATORY AGENCIES IN WRITING OF ALL RECEIVING SPOIL AND BORROW AREAS WHEN THEY HAVE BEEN IDENTIFIED.

10. CONTINUE INSTALLATION OF STORM DRAINAGE AS SUBGRADE ELEVATIONS ARE ACHIEVED.

11. CONSTRUCT PAD SUBGRADE PREPARATION AND BEGIN FOUNDATION CONSTRUCTION.

12. THROUGHOUT CONSTRUCTION SEQUENCE, REMOVE SEDIMENT FROM BEHIND SILT FENCES, STRAW BALES AND OTHER EROSION CONTROL DEVICES, AND FROM SEDIMENT TRAPS AS REQUIRED. REMOVAL SHALL BE ON A PERIODIC BASIS (EVERY SIGNIFICANT RAINFALL OF 0.50 INCH OR GREATER). INSPECTION OF EROSION/SEDIMENT CONTROL MEASURES SHALL BE ON A WEEKLY BASIS AND AFTER EACH RAINFALL OF 0.50 INCHES OR GREATER. SEDIMENT COLLECTED SHALL BE DEPOSITED AND SPREAD EVENLY UPLAND ON SLOPES DURING CONSTRUCTION.

13. COMPLETE GRADING TO SUBGRADES AND COMPLETE CONSTRUCTION OF FOUNDATIONS.

14. CONSTRUCT CURBS, PAVEMENT STRUCTURE AND SIDEWALKS

15. CONDUCT FINE GRADING.

16. PAVING OF ACCESS ROAD

17. CONSTRUCT OFF-SITE ROADWAY IMPROVEMENTS, AS NECESSARY.

18. INSTALL YARD SURFACE STONE. FINAL FINE GRADING OF SLOPE AND NON-PAVED AREAS.

19. PLACE 4" TOPSOIL ON SLOPES AFTER FINAL GRADING IS COMPLETED. FERTILIZE, SEED, AND MULCH.

20. LANDSCAPE INTERIOR NON-PAVED AREAS, NON-GRAVELED AREAS, AND PERIMETER AREAS.

21. INSTALL ON-SITE SIGNAGE AND PAVEMENT MARKINGS

22. CLEAN STORM DRAINAGE PIPE STRUCTURES, DETENTION SYSTEMS AND WATER QUALITY DEVICES OF DEBRIS AND SEDIMENT.

23. UPON DIRECTION OF THE OWNER, QUALIFIED PROFESSIONAL, AND REGULATORY AGENT, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED FOLLOWING STABILIZATION OF THE SITE.

ROUGH GRADING OPERATIONS

1. DURING THE REMOVAL AND/OR PLACEMENT OF EARTH AS INDICATED ON THE GRADING PLAN, TOPSOIL SHALL BE STRIPPED AND APPROPRIATELY STOCKPILED FOR REUSE.

2. ALL STOCKPILED TOPSOIL SHALL BE SEEDED, APPLY MULCH OR STRAW, AND ENCLOSED BY A SILTATION FENCE.

FILLING OPERATIONS

1. PRIOR TO FILLING, ALL SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE PROPERLY IMPLEMENTED, MAINTAINED AND FULLY INSTALLED, AS DIRECTED BY THE QUALIFIED PROFESSIONAL AND AS SHOWN ON THIS PLAN.

PLACEMENT OF DRAINAGE STRUCTURES, UTILITIES, AND FOUNDATION CONSTRUCTION OPERATIONS

1. SILT FENCES SHALL BE INSTALLED AT THE DOWNHILL SIDES OF EXCAVATIONS, MUD PUMP DISCHARGES, AND UTILITY TRENCH MATERIAL STOCKPILES. STRAW BALES MAY BE USED IF SHOWN ON THE EROSION CONTROL PLANS OR IF DIRECTED BY THE QUALIFIED PROFESSIONAL.

FINAL GRADING AND PAVING OPERATIONS

1. ALL INLET AND OUTLET PROTECTION SHALL BE PLACED AND MAINTAINED AS SHOWN ON EROSION CONTROL PLANS AND DETAILS, AND AS DESCRIBED IN SPECIFICATIONS AND AS DESCRIBED HEREIN.

2. NO CUT OR FILL SLOPES SHALL EXCEED 2:1 EXCEPT WHERE STABILIZED BY ROCK FACED EMBANKMENTS OR EROSION CONTROL BLANKETS, JUTE MESH AND VEGETATION. ALL SLOPES SHALL BE SEEDED, AND ANY ROAD OR DRIVEWAY SHOULDER AND BANKS SHALL BE STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING UNTIL TURF IS ESTABLISHED.

3. PAVEMENT SUB-BASE AND BASE COURSES SHALL BE INSTALLED OVER AREAS TO BE PAVED AS SOON AS FINAL SUB-GRADES ARE ESTABLISHED AND UNDERGROUND UTILITIES AND STORM DRAINAGE SYSTEMS HAVE BEEN INSTALLED.

4. AFTER CONSTRUCTION OF PAVEMENT, TOPSOIL, FINAL SEED, MULCH AND LANDSCAPING, REMOVE ALL TEMPORARY EROSION CONTROL DEVICES ONLY AFTER ALL AREAS HAVE BEEN PAVED AND/OR GRASS HAS BEEN WELL ESTABLISHED AND THE SITE HAS BEEN INSPECTED AND APPROVED BY THE OWNER AND THE APPLICABLE REGULATORY AGENCIES.

5. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM OF 85% UNIFORM PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS.

6. MAINTAIN ALL PERMANENT AND TEMPORARY SEDIMENT CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP PARKING LOT AND REMOVE ALL TEMPORARY SEDIMENT CONTROLS WHEN AUTHORIZED BY LOCAL GOVERNING AUTHORITY. FILE NOT (NOTICE OF TERMINATION) WITH GOVERNING AUTHORITY RESPONSIBLE FOR REGULATING STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES PER NPDES.

STATE OF NEW HAMPSHIRE
BRIAN J. SANDOWICH
No. 14328
LICENSED
PROFESSIONAL ENGINEER

This document has been digitally sealed.
Oct 5 2015

FOR PERMITTING PURPOSES ONLY
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NO.	ISSUED FOR: PERMITTING REVISION	DATE	DRWN	CHKD	APPRV
1		10/7/15	JJS	RLR	BSS

THE NORTHERN PASS

Transmission Business

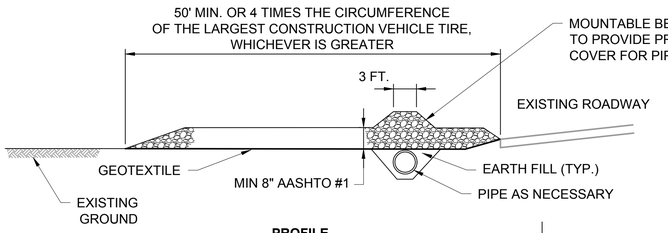
#

TRANSITION STATION #1
EROSION AND SEDIMENTATION CONTROL NOTES

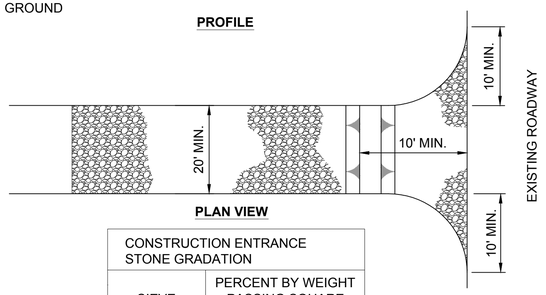
DATE: 10/1/2015
SCALE: NTS

DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN: OLD CANNAN ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 10 OF 19
NPTT110-C500
REVISION: XXX



PROFILE



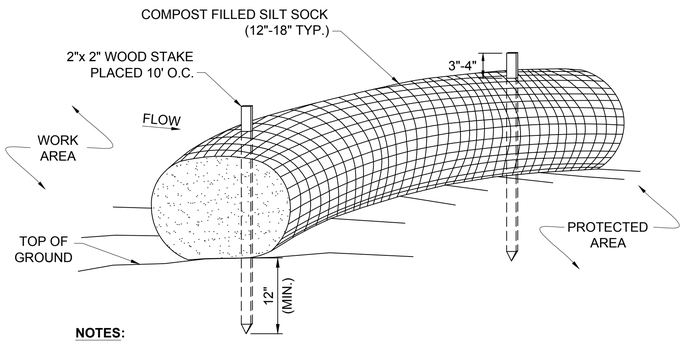
PLAN VIEW

CONSTRUCTION ENTRANCE STONE GRADATION	
SIEVE	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVE
2-1/2 INCH	100
2 INCH	90-100
1-1/2 INCH	35-70
1 INCH	0-15
1/2 INCH	0-5

NOTES:

1. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE SURFACE.
2. WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
3. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
4. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
5. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN STORM EVENT.

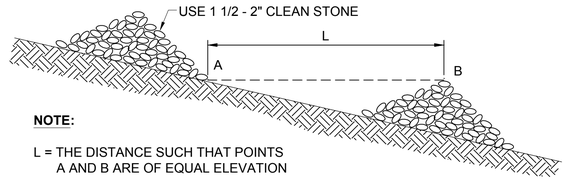
STABILIZED CONSTRUCTION ENTRANCE — NOT TO SCALE — 1 / C102



NOTES:

1. SILT SOCK SHALL BE FILTREXX™ SILTSOXX™ OR APPROVED EQUIVALENT.
2. SEE SPECIFICATIONS FOR SOCK SIZE AND COMPOST FILL REQUIREMENTS.
3. SILT SOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED AS NEEDED.
4. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE QUALIFIED PROFESSIONAL.

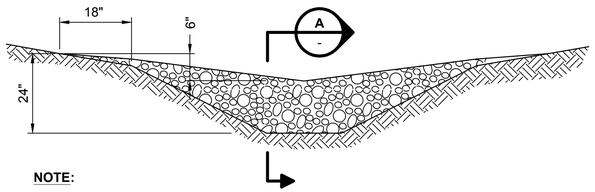
SILT SOCK — NOT TO SCALE — 4 / C102



NOTE:

L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

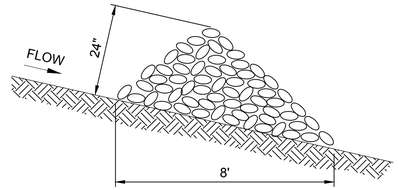
SIDE VIEW



NOTE:

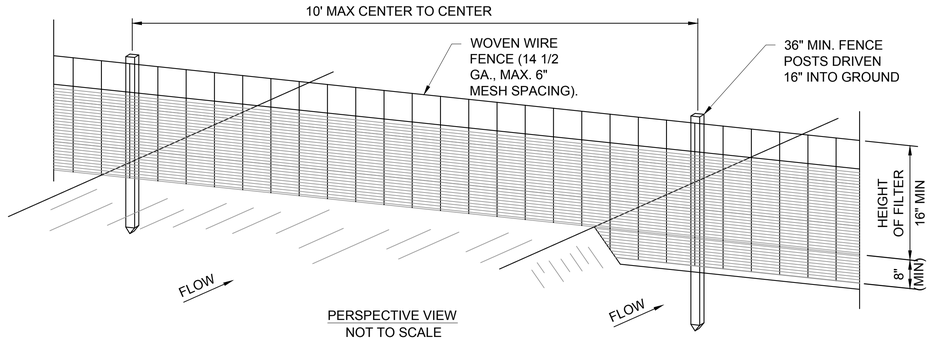
KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIMUM OF 18" TO PREVENT FLOW AROUND THE DAM.

VIEW LOOKING UPSTREAM

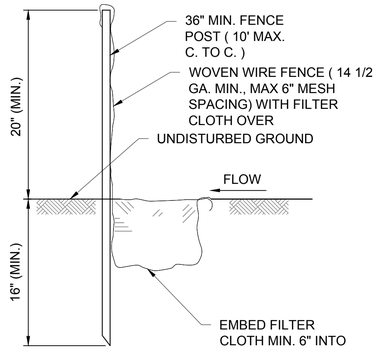


SECTION A

STONE CHECK DAM — NOT TO SCALE — 2 / C102



PERSPECTIVE VIEW
NOT TO SCALE

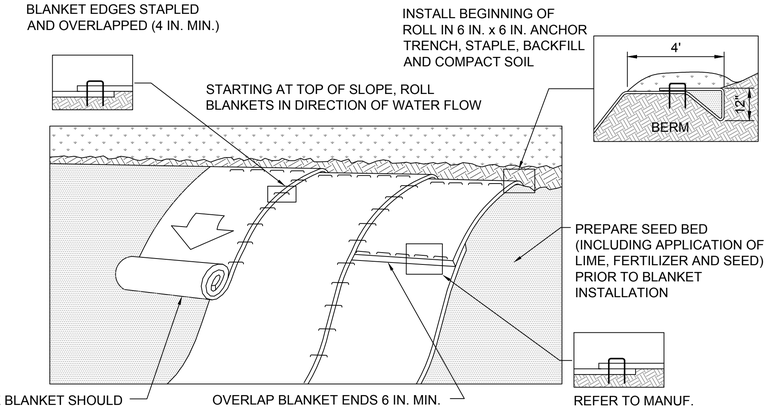


NOTES:

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER- LAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS:	STEEL EITHER "T" OR "U" TYPE OR 2" HARDWOOD.
FENCE:	WOVEN WIRE 14 1/2 GA. 6" MAX. MESH OPENING.
FILTER CLOTH:	FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.
PREFABRICATED UNIT:	GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

SILT FENCE — NOT TO SCALE — 3 / C102



EROSION CONTROL BLANKET — NOT TO SCALE — 5 / C102

NOTES:

1. SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.
2. PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.
3. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.
4. BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.
5. THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

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Oct 5 2015

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

NO.	ISSUED FOR: PERMITTING	DATE	DRWN	CHKD	APPRV.
1	REVISION	10/7/15	JJS	RLR	BSS

THE NORTHERN PASS
Transmission Business

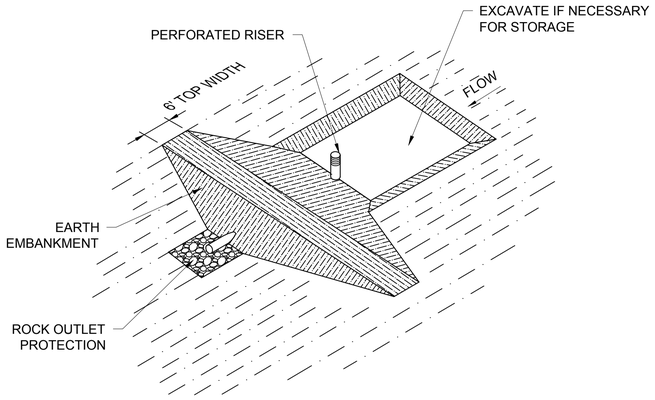
TRANSITION STATION #1
EROSION AND SEDIMENTATION CONTROL DETAILS

DATE: 10/1/2015
SCALE: NTS

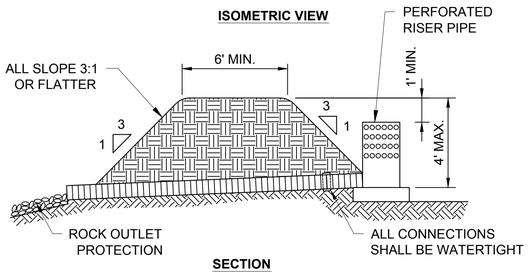
DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN: 53 DAWN ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 11 OF 19
NPTT111-C501
REVISION: XXX

\\BMCD\DFS\CLIENTS\TND\NUSC\58466_NPT\DESIGN\SUBSTATION\100-TRANSITION_STATION-1\CADD\CIVIL-SITE\NPTT111-C501.DWG 10/2/2015 6:23 PM KAMARX

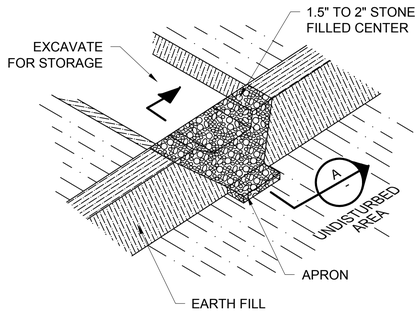


ISOMETRIC VIEW

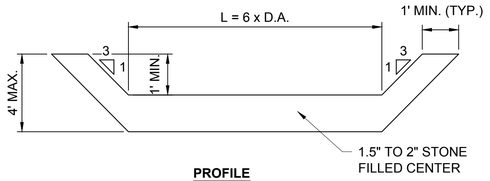


SECTION

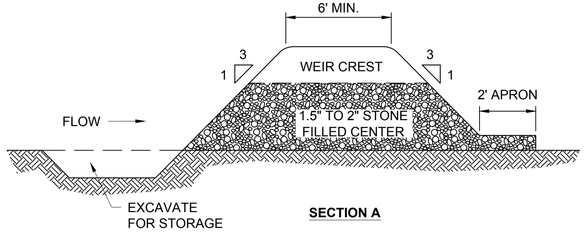
PIPE OUTLET SEDIMENT TRAP 1 C502
NOT TO SCALE



ISOMETRIC VIEW



PROFILE

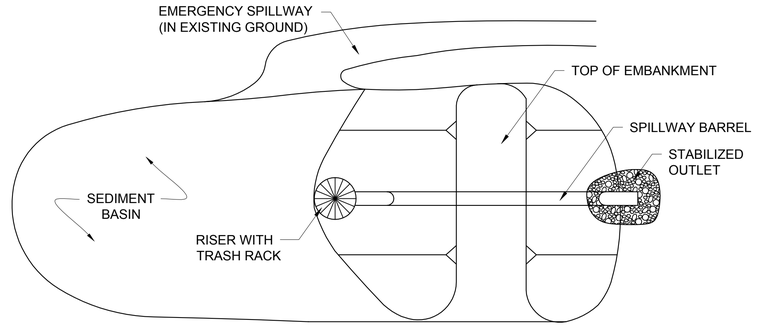


SECTION A

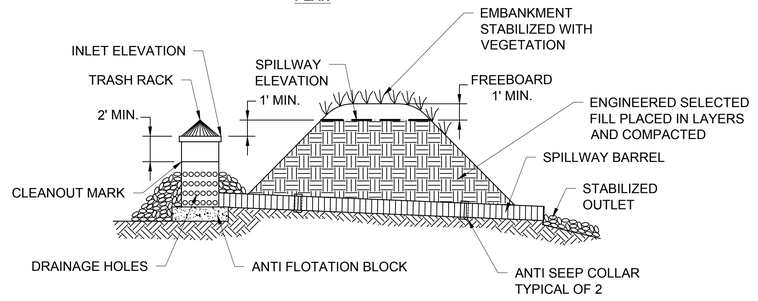
STONE OUTLET SEDIMENT TRAP 2 C502
NOT TO SCALE

NOTES:

1. REQUIRED FOR DISTURBED AREAS GREATER THAN 5 ACRES WITHIN A DRAINAGE AREA LESS THAN 100 ACRES.
2. SEDIMENT BASIN WILL BE REMOVED WITHIN 3 YEARS.

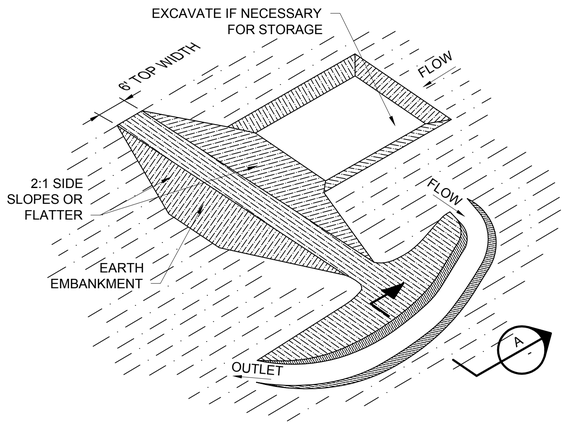


PLAN

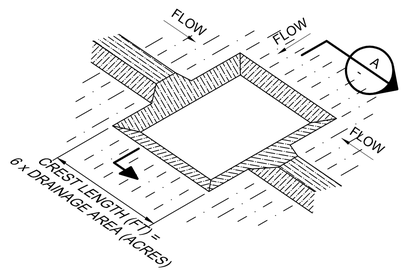


SECTION

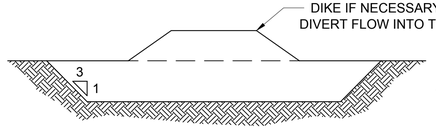
TYPICAL SEDIMENT BASIN 3 C502
NOT TO SCALE



ISOMETRIC VIEW

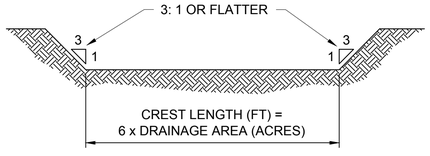


ISOMETRIC VIEW



SECTION A

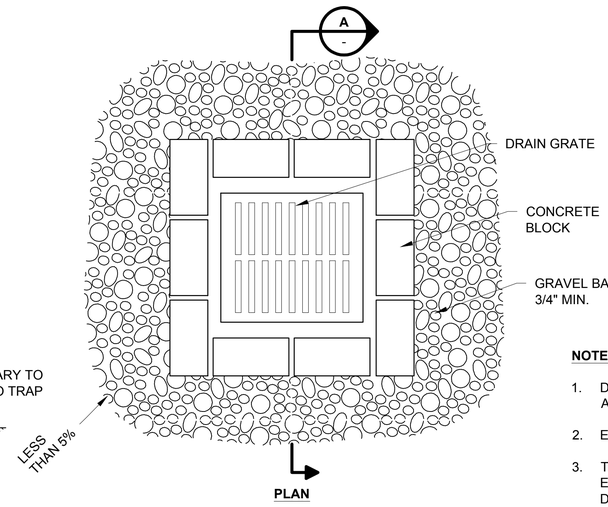
EXCAVATED



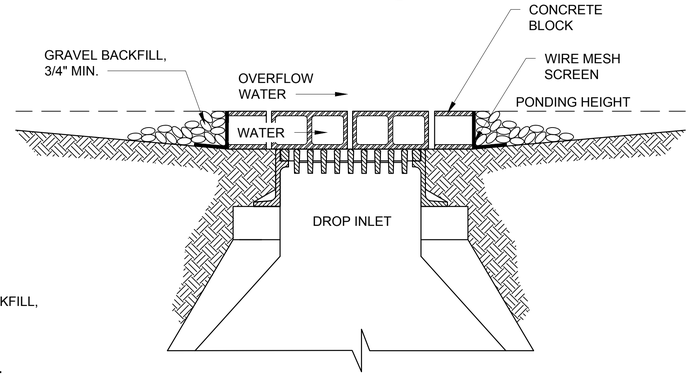
SECTION A

EMBANKMENT

EARTH OUTLET SEDIMENT TRAP 4 C502
NOT TO SCALE



PLAN



SECTION A

NOTES:

1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)
2. EXCAVATE A BASIN OF SUFFICIENT SIZE ADJACENT TO THE DROP INLET.
3. THE TOP OF THE STRUCTURE (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

CONCRETE BLOCK AND GRAVEL DROP INLET SEDIMENT BARRIER 5 C102
NOT TO SCALE

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Oct 5 2015

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NO.	REVISION	DATE	DRWN	CHKD	APPRV
1	ISSUED FOR PERMITTING	10/1/15	JJS	RLR	BSS

THE NORTHERN PASS
Transmission Business

TRANSITION STATION #1
EROSION AND SEDIMENTATION CONTROL DETAILS

DATE: 10/1/2015
SCALE: N.T.S.

DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN:
123 CANAN ROAD, PITTSBURG, NH

TRANSMISSION LINE:

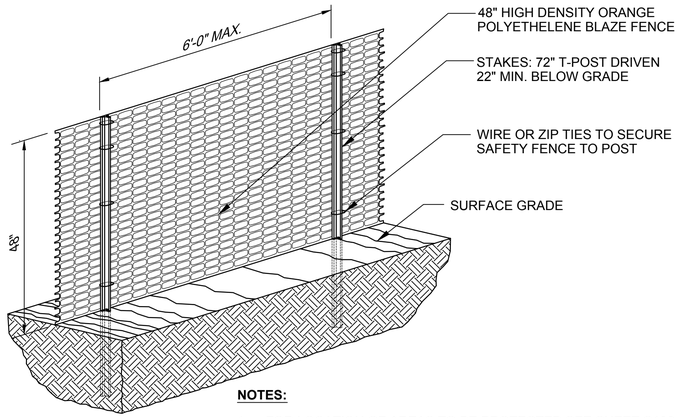
MILE NO:

SHEET 12 OF 19

NPTT112-C502

REVISION: XXX

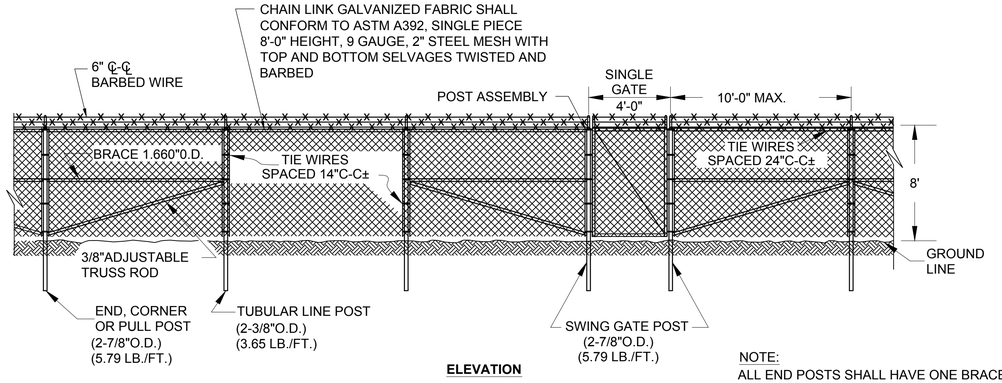
\\BMCD\DFS\CLIENTS\TND\NUSC\58466_NPT\DESIGN\SUBSTATION\100-TRANSITION_STATION-1\CADD\CIVIL-SITE\NPTT112-C502.DWG 10/2/2015 8:59 PM KAMARX



NOTES:

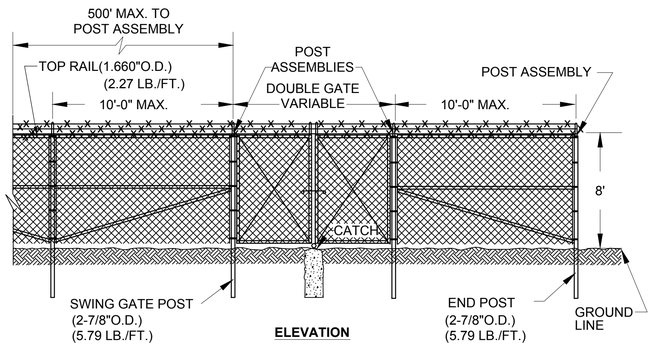
1. FOR LOCATION OF AREAS TO BE PROTECTED SEE SHEET C102.
2. SAFETY FENCE SHALL BE FASTENED SECURELY TO THE T-POSTS.
3. THE FENCING MUST REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION AND UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED.

CONSTRUCTION FENCE 1
NOT TO SCALE C102

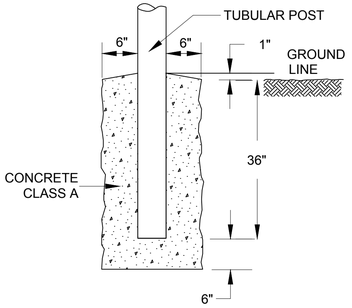


ELEVATION

NOTE:
ALL END POSTS SHALL HAVE ONE BRACE ALL CORNER AND INTERMEDIATE BRACE OR PULL POSTS SHALL HAVE TWO BRACES, WITH A MAXIMUM SPACING OF BETWEEN POST ASSEMBLIES OF 500 FEET.

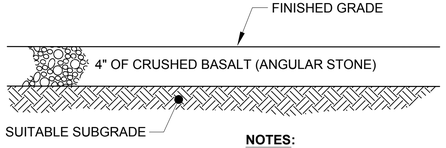


ELEVATION



FOOTING DETAIL

SECURITY FENCE 2
NOT TO SCALE C100

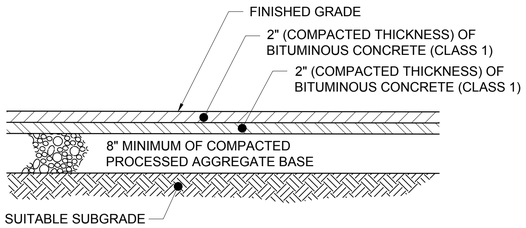


NOTES:

1. REMOVE ALL LOAM, CLAY, MUCK, STUMPS, AND OTHER IMPROPER ROAD FOUNDATION MATERIAL WITHIN 2' OF SUBGRADE. REPLACE WITH COMPACTED GRANULAR FILL MATERIAL ACCEPTABLE TO APPROVING AGENCY. COMPACTION TO BE AT LEAST 95% OF STANDARD PROCTOR.
2. SUBSTATION SURFACE STONE SHALL EXTEND 5-FT OUTSIDE THE SUBSTATION PERIMETER FENCE.
3. GRAVEL ACCESS ROADS SHALL HAVE AT LEAST 8-INCHES OF PROCESSED AGGREGATE BASE.

SUBSTATION AND ACCESS ROAD SURFACE STONE GRADATION	
SIEVE	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVE
1-1/2 INCH	100
1 INCH	93-100
1/2 INCH	27-58
1/4 INCH	0-8

SUBSTATION GRAVEL SURFACE SECTION 3
NOT TO SCALE C100

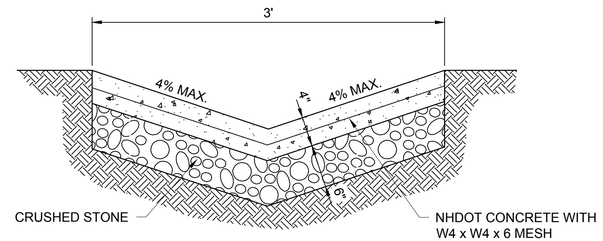


PAVEMENT AGGREGATE BASE STONE GRADATION	
SIEVE	PERCENT BY WEIGHT PASSING SQUARE MESH SIEVE
2-1/2 INCH	100
2 INCH	95-100
3/4 INCH	50-75
1/4 INCH	25-45
NO. 40	5-20
NO. 100	2-12

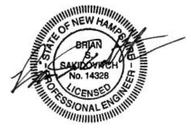
ROAD CONSTRUCTION NOTES:

1. REMOVE ALL LOAM, CLAY, MUCK, STUMPS, AND OTHER IMPROPER ROAD FOUNDATION MATERIAL WITHIN 2' OF SUBGRADE. REPLACE WITH COMPACTED GRANULAR FILL MATERIAL ACCEPTABLE TO APPROVING AGENCY. COMPACTION TO BE AT LEAST 95% OF STANDARD PROCTOR.
2. ALL PAVEMENT, BASE MATERIALS AND WORKMANSHIP TO BE IN COMPLIANCE WITH N.H.D.O.T. "STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION.

BITUMINOUS CONCRETE PAVEMENT SECTION 4
NOT TO SCALE C100



CONCRETE CHANNEL 5
NOT TO SCALE C100 C101



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Oct 5 2015

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

NO.	ISSUED FOR: PERMITTING REVISION	DATE	DRWN	CHKD	APPRV.
1		10/7/15	JJS	RLR	BSS

THE NORTHERN PASS
Transmission Business

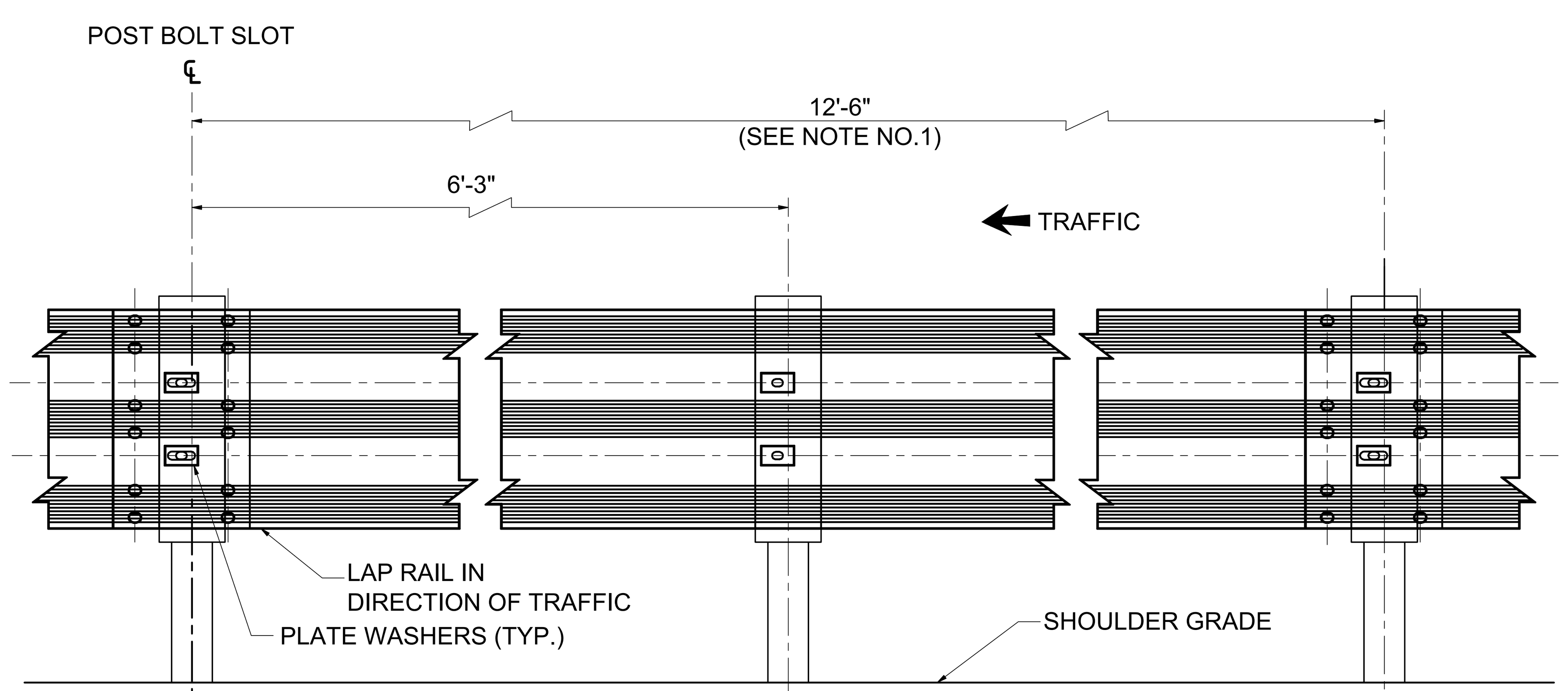
TRANSITION STATION #1
CONSTRUCTION DETAILS

DATE: 10/1/2015
SCALE: NTS

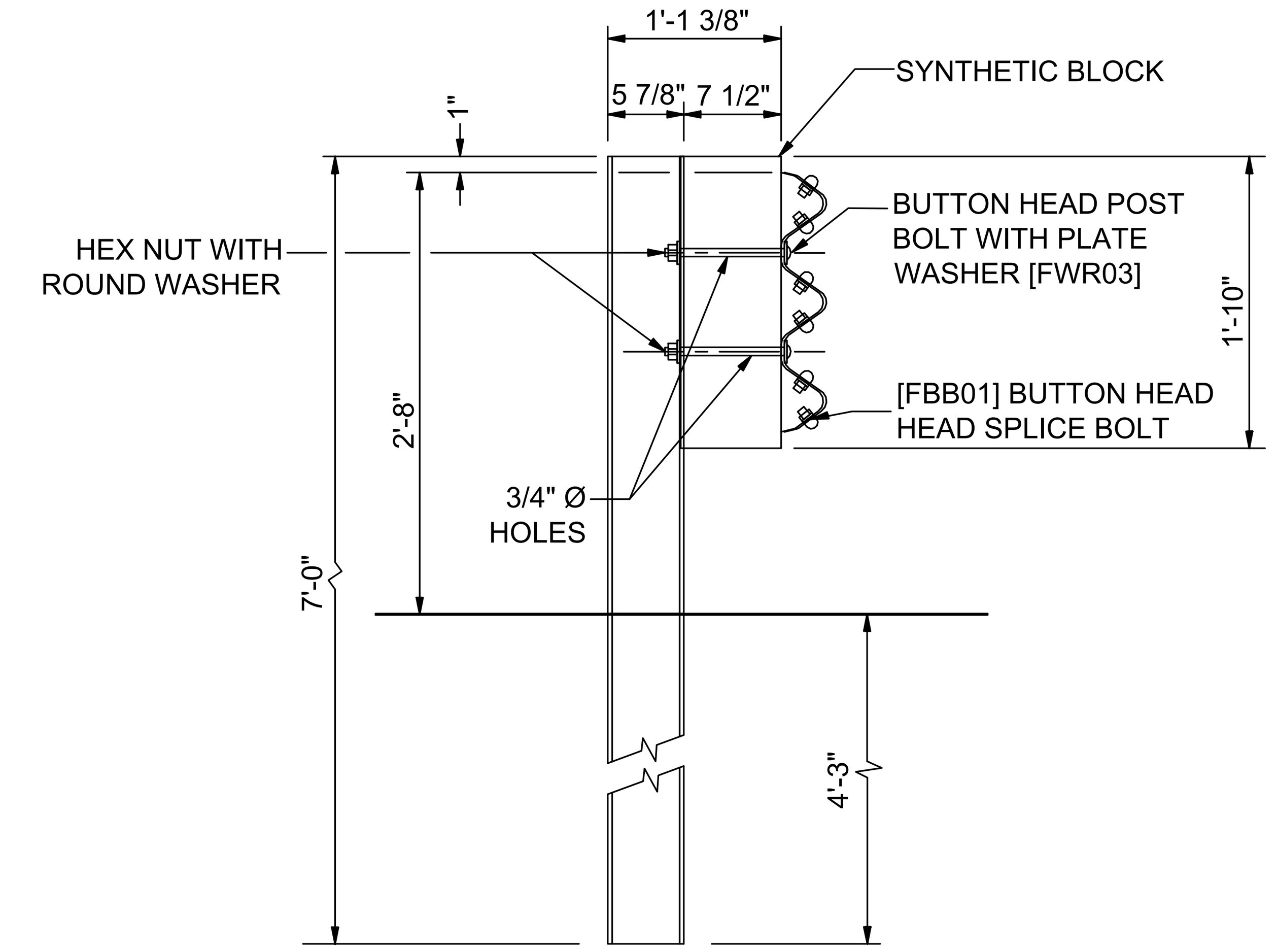
DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN: OLD CHAWN ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 13 OF 19
NPTT113-C503
REVISION: XXX

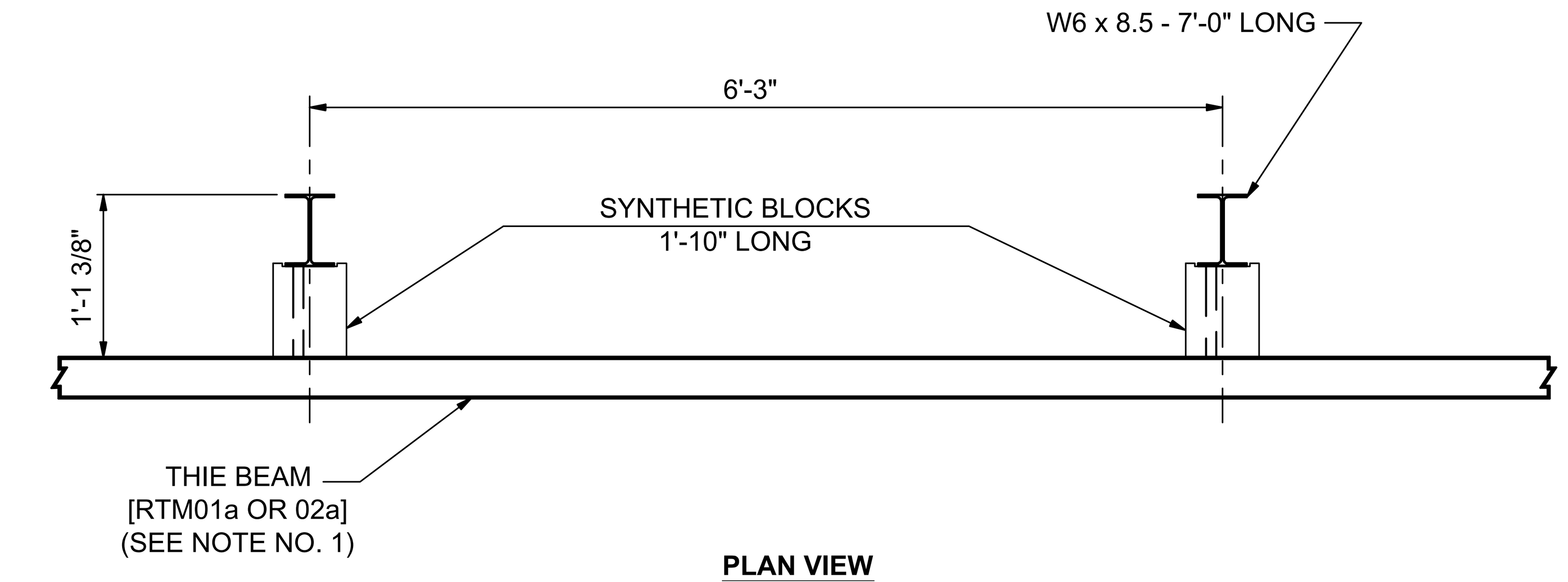
\\BMCD\DFS\CLIENTS\TND\NUSC\58466_NPT\DESIGN\SUBSTATION\100-TRANSITION_STATION-1\CADD\CIVIL-SITE\NPTT113-C503.DWG 10/2/2015 6:36 PM KAMARX



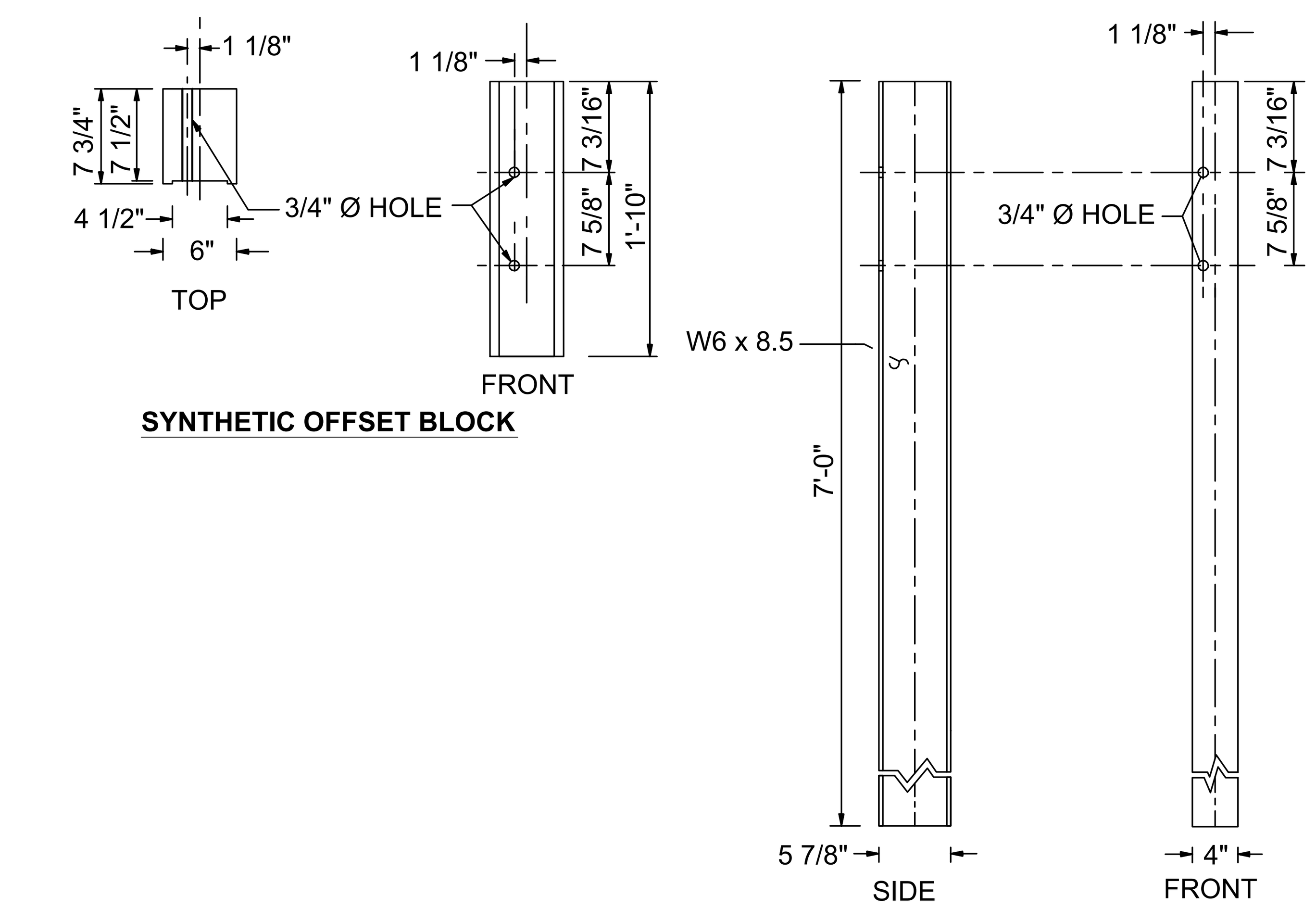
ELEVATION VIEW



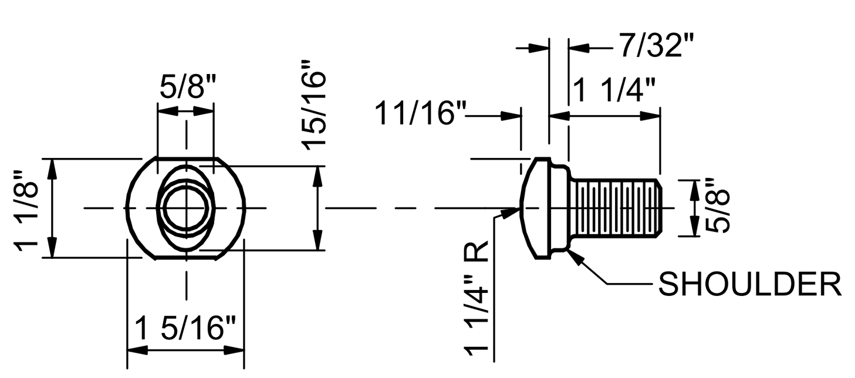
SIDE VIEW AT SPLICE POST



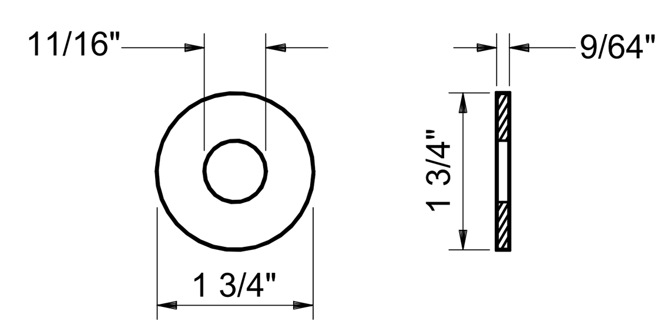
PLAN VIEW



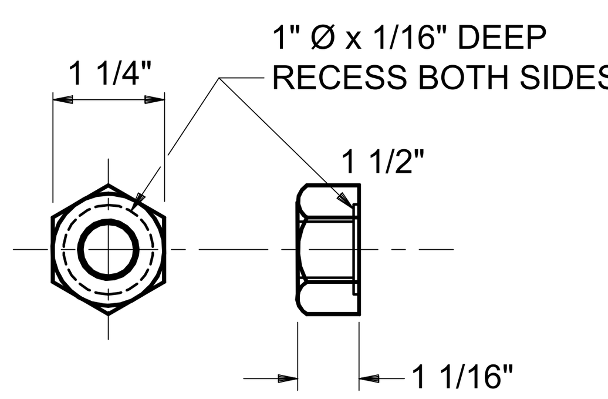
STRUCTURAL SHAPE STEEL POST & BLOCK



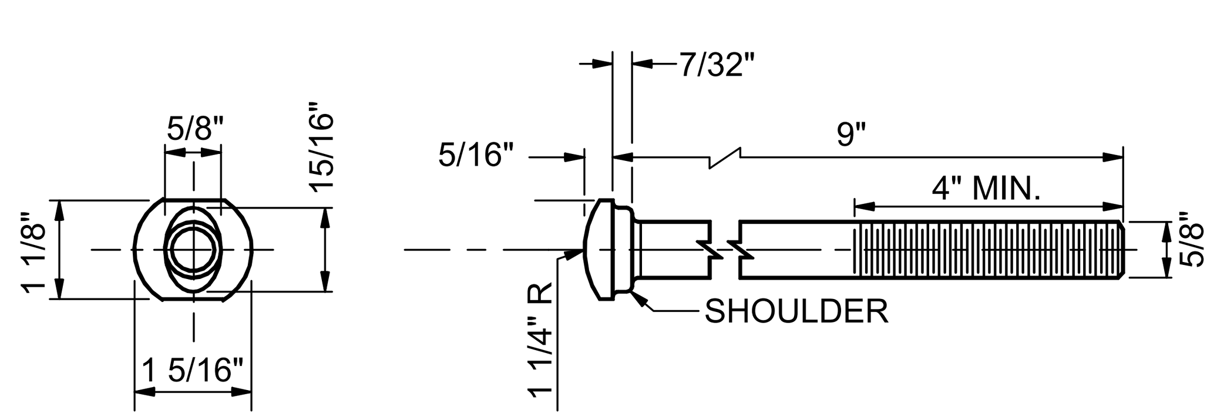
SPLICE POST
[FBB01]
(12 REQ'D PER SPLICE)



ROUND WASHER
[FWC16a]



NUT FOR SPLICE & POST BOLTS
[FBB01]



POST BOLT

NOTE :
LONGER ERECTION BOLTS MAY BE REQUIRED.

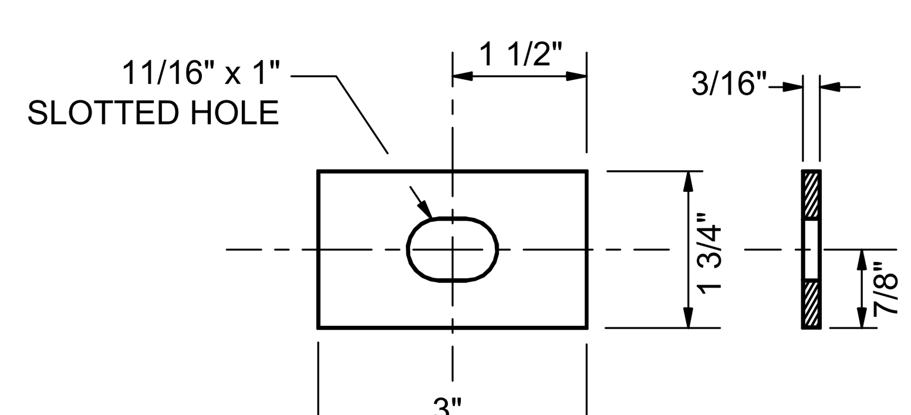
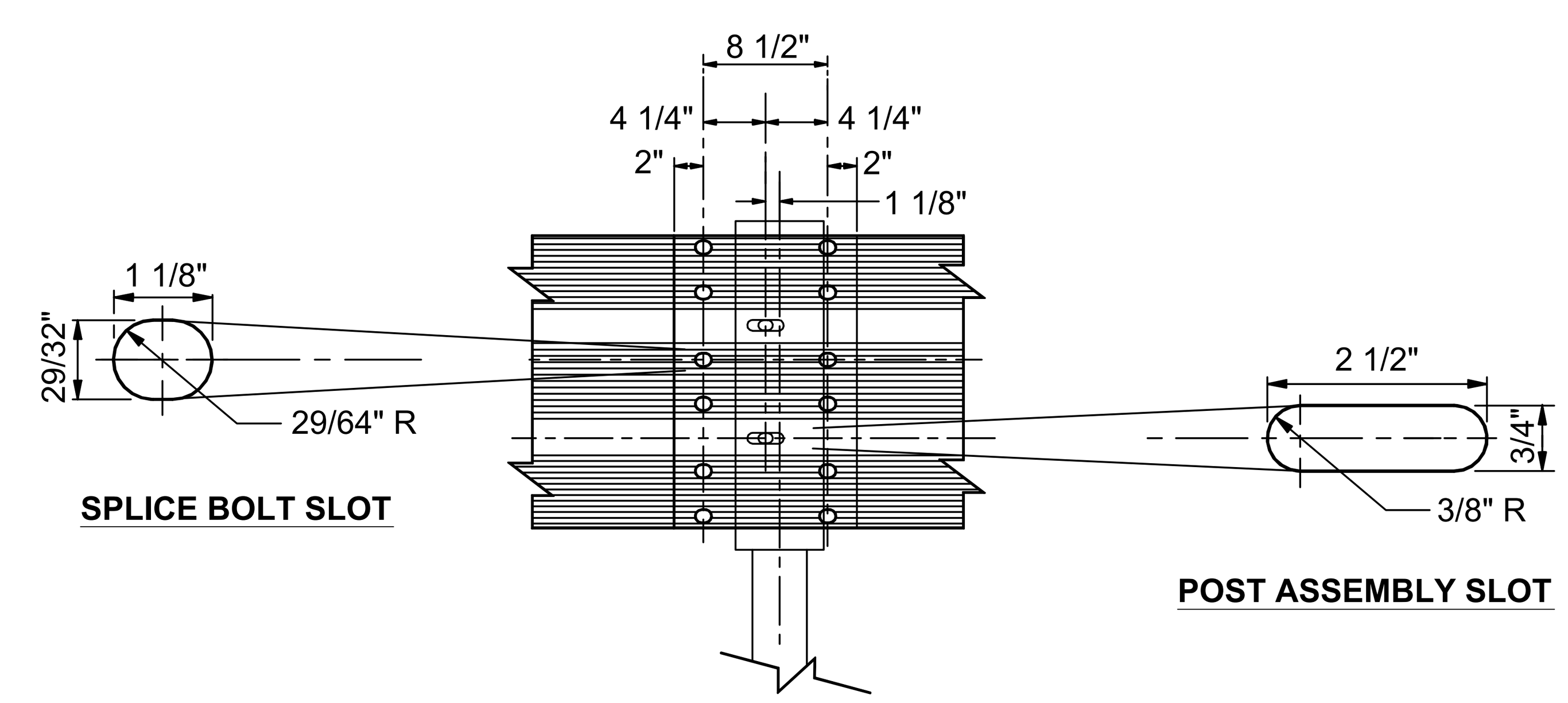
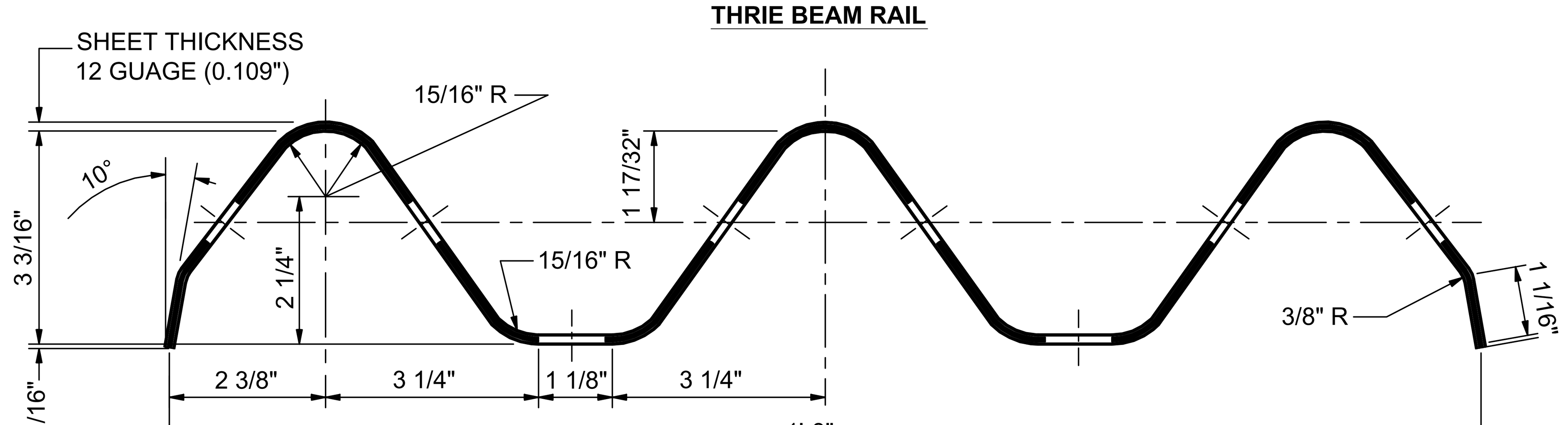


PLATE WASHER
[FWC03]

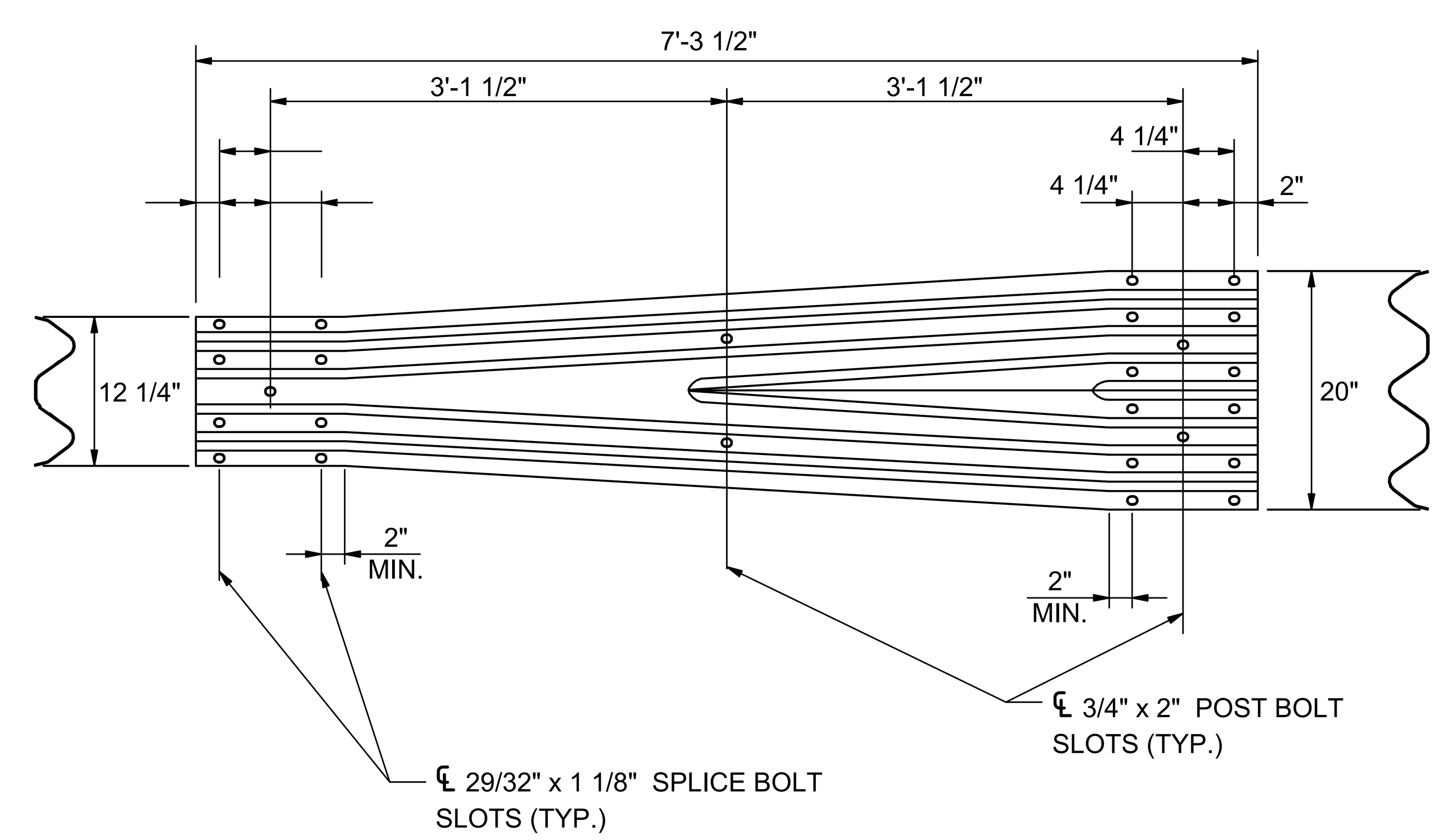


BEAM SPLICE

THRIE BEAM RAIL



THRIE BEAM RAIL SECTION
[RTM01a & RTM02a]



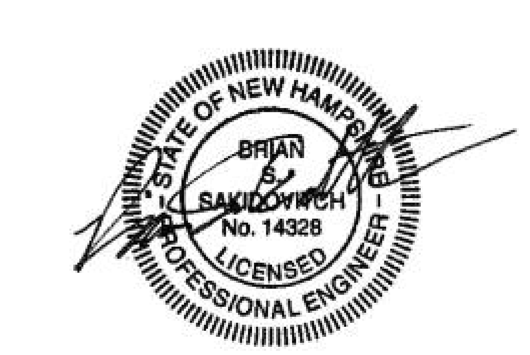
W-THRIE BEAM TRANSITION SECTION
[RTM01a]

SOURCE: NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION.
NOTE : NHDOT GUIDERAIL DETAILS SHOWN FOR REFERENCE ONLY.

NHDOT GUIDERAIL (GR-14) 1 / C100
NOT TO SCALE

NOTES:

1. 25'-0" RAIL PANELS MAY BE USED IN PLACE OF 12'-6" PANELS, EXCEPT ON CURVES WITH A RAIL RADIUS OF LESS THAN 300 FT.
2. GUIDERAIL HEIGHT SHALL BE SET FROM THE GRADE AT THE FACE OF RAIL.
3. DESIGNATIONS PROVIDED IN BRACKETS [ ] REFERENCE STANDARD ELEMENTS DETAILED IN "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE", LATEST ADOPTED VERSION, AASHTO-AGC-ARTBA JOINT COOPERATIVE COMMITTEE.
4. SEE STD. NO. DL-1 FOR BEAM GUIDERAIL DELINEATORS.
5. PAID FOR UNDER APPROPRIATE 606 ITEMS, OR AS SHOWN ON PLANS.
6. DIMENSIONS OF PLASTIC AND SYNTHETIC BLOCKOUTS ARE AS SHOWN ON MANUFACTURER'S DRAWINGS.
7. POSTS SHORTER THAN THE 7'-0" INDICATED ON THE DETAIL, BUT NOT LESS THAN 6'-6", MAY ONLY BE USED WHEN
   A) THE SLOPE BEHIND THE GUIDEDRAIL IS NO STEEPER THAN 4:1
   B) WHERE THE DISTANCE FROM THE BACK OF THE POST TO THE BREAK OF THE SLOPE IS A MINIMUM OF 2'-0"
   C) AND THEN ONLY AS APPROVED OR SPECIFICALLY SHOWN ON THE PLANS.



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Oct 5 2015

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NO.	REVISION	DATE	DRWN	CHKD	APPRV.
1	ISSUED FOR PERMITTING	10/1/15	JJS	RLR	BSS

SEAL

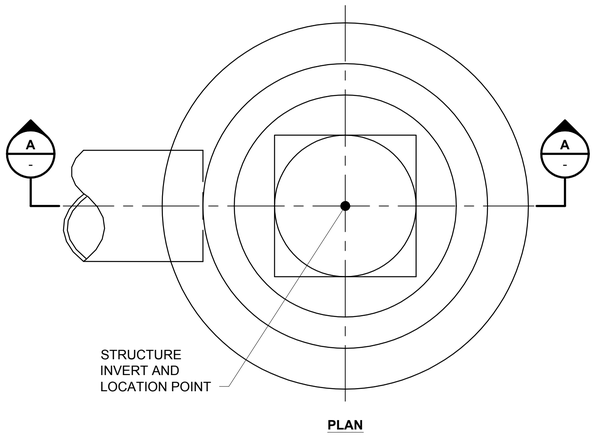
A/E INFO

THE NORTHERN PASS
Transmission Business
#

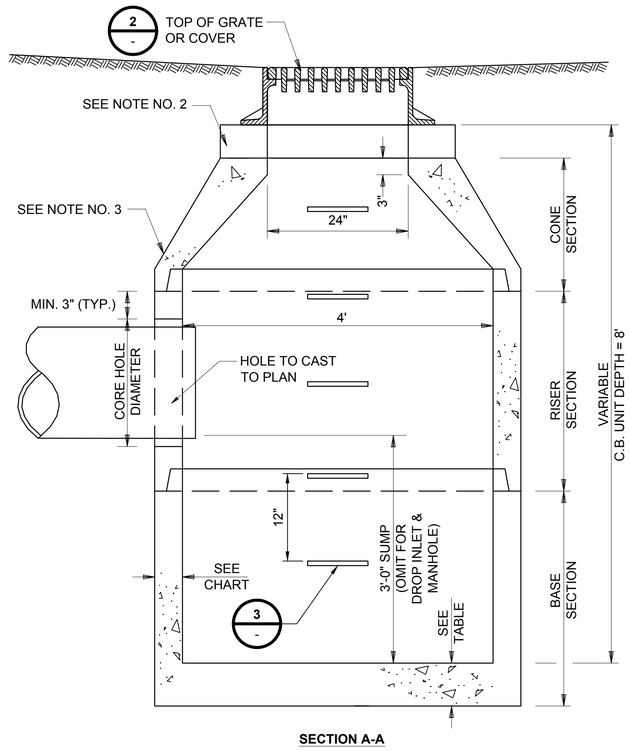
TRANSITION STATION #1
CONSTRUCTION DETAILS
DATE: 10/1/2015
SCALE: NTS

DES: JJS | CHK: RLR
DRW: JJS | APR: BSS
TOWN: OLD CANAAN ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 14 OF 19
NPTT114-C504
REVISION: XXX

DIAMETER	WALL THICKNESS (MIN.)	FLOOR THICKNESS (MIN.)
4'	5"	6"
5'	6"	8"
6'	7"	8"
8'	9"	10"



PLAN

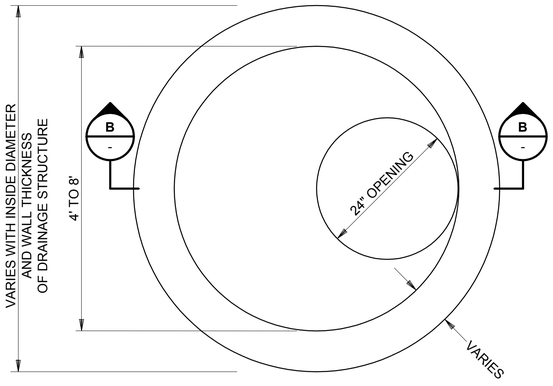


SECTION A-A

SOURCE: NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR ROAD CONSTRUCTION 2010.

PRECAST CONCRETE CATCH BASIN 1 / C104
NOT TO SCALE

CORE HOLE SIZE				
PIPE SIZE	RCP CORE HOLE DIA.		PLASTIC CORE HOLE DIA.	
INCHES	INCHES	FEET	INCHES	FEET
6			7	0.6
12	18	1.5	18	1.5
15	22	1.8	20	1.7
18	26	2.2	24	2.0
24	34	2.8	32	2.7
30	42	3.5	42	3.5
36	48	4.0	48	4.0
42	54	4.5	54	4.5
48	64	5.3	64	5.3
54	72	6.0		
60	78	6.5		



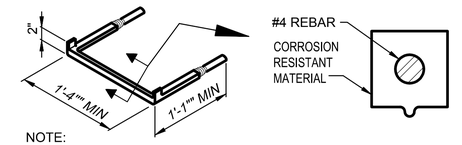
PLAN

* FOR 6' Ø STRUCTURES
USE 16" & 12" DIMENSIONS

SECTION B-B
FLAT SLAB TOP

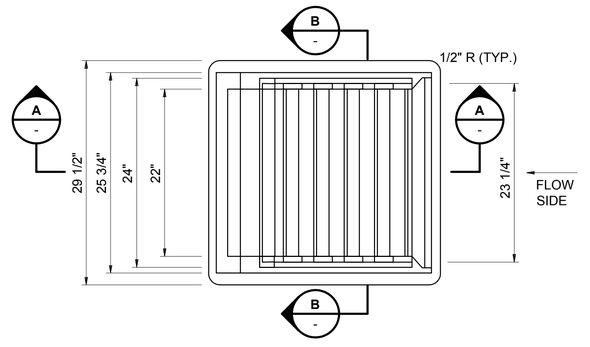
GENERAL NOTES:

1. CATCH BASIN TO CONFORM TO NH DOT SECTION 604.1 REQUIREMENTS.
2. FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES MAX.).
3. CONE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC, OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE AND WHERE PERMITTED.
4. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
5. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
6. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
7. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZONTAL CROSS-SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.

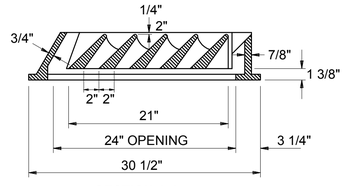


NOTE:
No. 4 REBAR ENCASED IN CORROSION RESISTANT RUBBER OR OTHER MATERIAL APPROVED BY THE OWNER'S REPRESENTATIVE.

MANHOLE STEP 3 / -
NOT TO SCALE



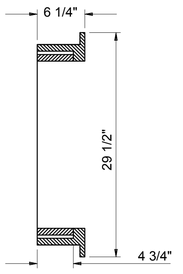
PLAN



SECTION A-A

SOURCE: NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD PLANS FOR ROAD CONSTRUCTION 2010.

TYPE "E" GRATE 1 / -
NOT TO SCALE



SECTION B-B

NOTES:

1. ALL DIMENSIONS ARE NOMINAL.
2. NOT TO BE USED WHEN BICYCLE TRAFFIC IS ANTICIPATED.
3. USE 3-FLANGE FRAME IF INSTALLED ADJACENT TO GRANITE CURB.
4. FREE OPEN AREA = 1.80 S.F.

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1		10/1/15	JJS	RLR	BSS

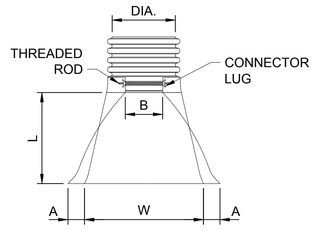
THE NORTHERN PASS
Transmission Business

TRANSITION STATION #1
CONSTRUCTION DETAILS

DATE: 10/1/2015
SCALE: NTS

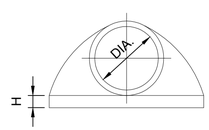
DES: JJS	CHK: RLR
DRW: JJS	APR: BSS

TOWN: OLD CANNAN ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 15 OF 19
NPTT115-C505
REVISION: XXX

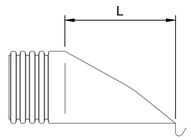


PLAN

PIPE DIA.	A	B	H	L	W
12"	6.5"	10.0"	6.5"	25'	29"
15"	6.5"	10.0"'	6.5"	25"	29"
18"	7.5"	15.0"	6.5"	32"	35"
24"	7.5"	18.0"	6.5"	36"	45"
30"	7.5"	22.0"	8.6"	58"	63"
36"	7.5"	25.0"	8.6"	58"	63"



ELEVATION



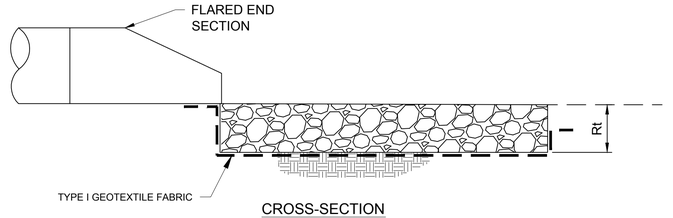
END VIEW

TYPICAL CROSS-SECTION

NOTES:

1. FLARED END SECTION SHALL BE HIGH DENSITY POLYETHYLENE MEETING ASTM D3350 MINIMUM CELL CLASSIFICATION 213320C.
2. METAL THREADED FASTENING ROD SHALL BE STAINLESS STEEL.
3. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS

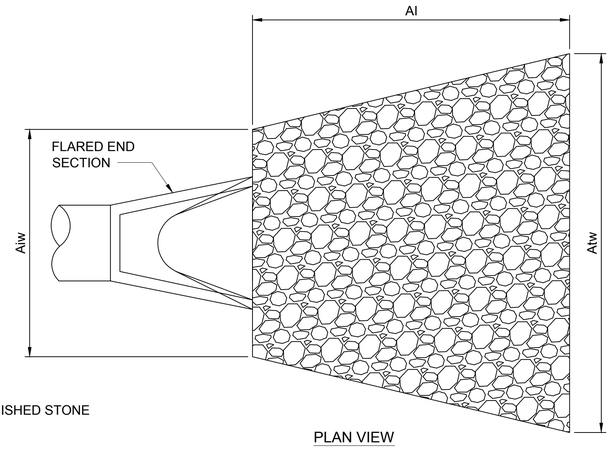
END SECTION FOR HDPE PIPE — 1 / C104
NOT TO SCALE



CROSS-SECTION

NOTES:

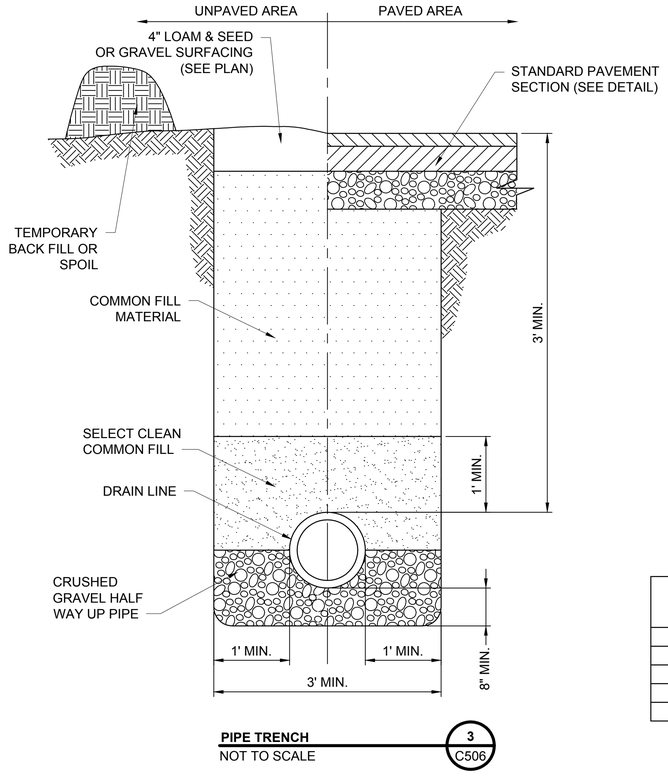
1. THE SUBGRADE FOR GEOTEXTILE FABRIC AND RIP-RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN.
2. THE ROCK USED FOR RIP-RAP SHALL CONFORM TO NHDOT CLASS C STONE.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE PREPARED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP-RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.



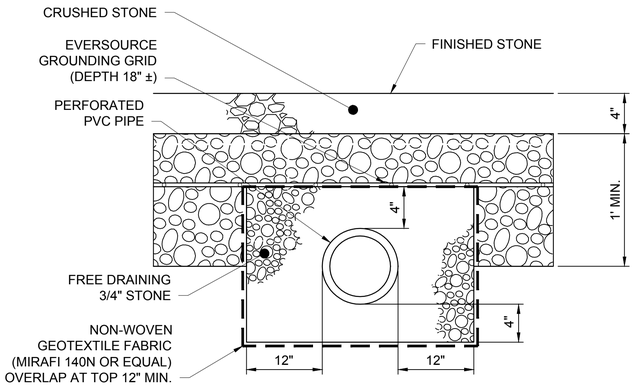
PLAN VIEW

OUTLET NO.	PIPE DIA Pd (IN)	RIP RAP		APRON		
		SIZE (D50)	THICK. Rt (IN)	LENGTH Al (FT)	INITIAL WIDTH Aiw (FT)	TERMINAL WIDTH Atw (FT)
A	24	6	18	28	6	17
B	24	9	27	21	10	27
C	18	6	18	18	4.5	22

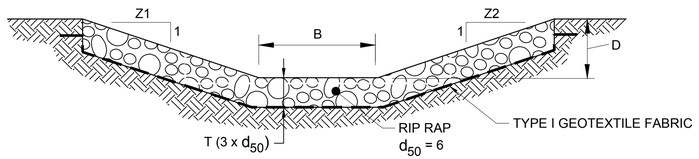
OUTLET PROTECTION — 2 / C104
NOT TO SCALE



PIPE TRENCH — 3 / C506
NOT TO SCALE



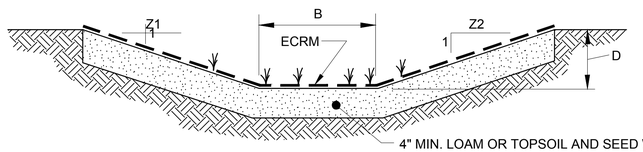
UNDERDRAIN — 4 / C104
NOT TO SCALE



NOTES
1. CHANNEL DIMENSIONS ARE FOR THE COMPLETED CHANNEL.
2. CHANNEL SHALL BE CONSTANTLY MAINTAINED. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY.
3. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.
4. INSTALL RIPRAP PER SPECIFICATIONS IN THE NH DES STORMWATER MANUAL.

CHANNEL	LENGTH (FT.)	B	D	SIDE SLOPE		RIPRAP GRADATION	t (IN.)	UNDERLAYMENT	UNDERLAYMENT THICKNESS (IN.)
				Z1	Z2				
A	306	2'	1.5'	3	3	-	18	GRAVEL	6
C	250	2'	1.5'	3	3	-	18	GRAVEL	6
E	310	2'	1.5'	3	3	-	18	GRAVEL	6
G	80	2'	0	0	0	-	18	GRAVEL	6
I	36	2'	1	3	3	-	18	GRAVEL	6

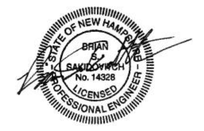
RIPRAP SWALE CROSS SECTION — 5 / C101, C104
NOT TO SCALE



NOTES
1. CHANNEL DIMENSIONS ARE FOR THE COMPLETED CHANNEL FINISH SURFACE GRADE.
2. INSTALL EROSION CONTROL BLANKET LINING TO TOP OF CHANNEL.
3. INSTALL LINING PER MANUFACTURES SPECIFICATIONS AND RECOMMENDATIONS. SEED SLOPES PRIOR TO INSTALLATION PER MANUFACTURER RECOMMENDATIONS.
4. VEGETATED CHANNELS SHALL BE CONSTRUCTED FREE OF ROCKS, TREE ROOTS, STUMPS OR OTHER PROJECTIONS THAT WILL IMPEDE NORMAL CHANNEL FLOW AND/OR PREVENT GOOD LINING TO SOIL CONTACT. THE CHANNEL SHALL BE INITIALLY OVER-EXCAVATED TO ALLOW FOR THE PLACEMENT OF TOPSOIL.
5. ALL CHANNELS MUST BE KEPT FREE OF OBSTRUCTIONS SUCH AS FILL GROUND, FALLEN LEAVES AND WOODY DEBRIS, ACCUMULATED SEDIMENT, AND CONSTRUCTION MATERIALS/WASTES. CHANNELS SHOULD BE KEPT MOWED AND/OR FREE OF ALL WEEDY, BRUSHY OR WOODY GROWTH. ANY UNDERGROUND UTILITIES RUNNING ACROSS/THROUGH THE CHANNEL(S) SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL(S) REPAIRED AND STABILIZED PER THE CHANNEL CROSS-SECTION DETAIL. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

CHANNEL	LENGTH (FT.)	B	D	SIDE SLOPE		LINING	STAPLE PATTERN	SLOPE (%)
				Z1	Z2			
B	190'	2'	1.5'	3	3	ECRM	-	0.8
D	140'	2'	1.5'	3	3	ECRM	-	2.0
F	88'	10'	1.5'	3	3	ECRM	-	0.2
H	200'	0	1.5'	3	3	ECRM	-	0.7

GRASS SWALE CROSS SECTION — 6 / C101, C104
NOT TO SCALE



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NO.	ISSUED FOR PERMITTING	DATE	DRWN	CHKD	APPRV.
1	REVISION	10/1/15	JJS	RLR	BSS

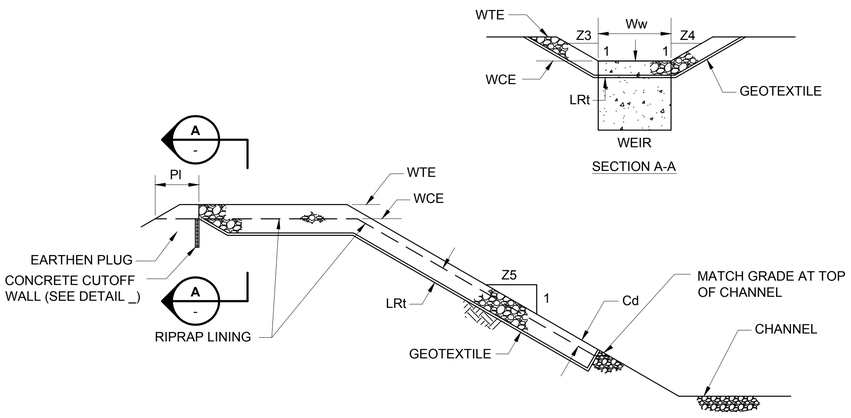
THE NORTHERN PASS
Transmission Business
#

TRANSITION STATION #1
CONSTRUCTION DETAILS

DATE: 10/1/2015
SCALE: NTS

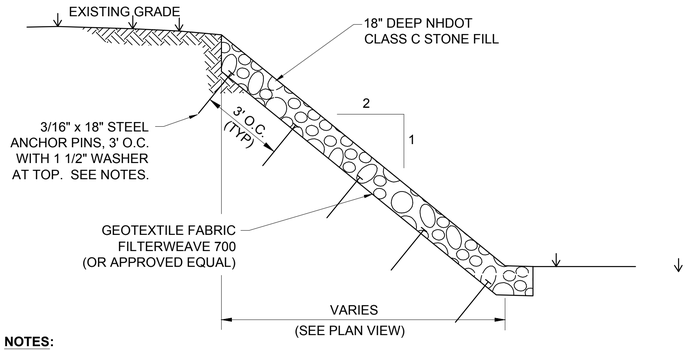
DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN: OLD CANNN ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 16 OF 19
NPTT116-C506
REVISION: XXX



BASIN NO.	WEIR						LINING		CHANNEL	
	Z3 (FT)	Z4 (FT)	TOP ELEV WTE (FT)	CREST ELEV WCE (FT)	WIDTH Ww (FT)	PI (FT)	RIPRAP SIZE (R-_)	RIPRAP THICK. LRt (IN)	Z5 (FT)	DEPTH Cd (FT)
1	3	3	1162.60	1161.60	11	5	6	18	VARIES	0'

SECTION THROUGH SPILLWAY — 1 / C104



NOTES:

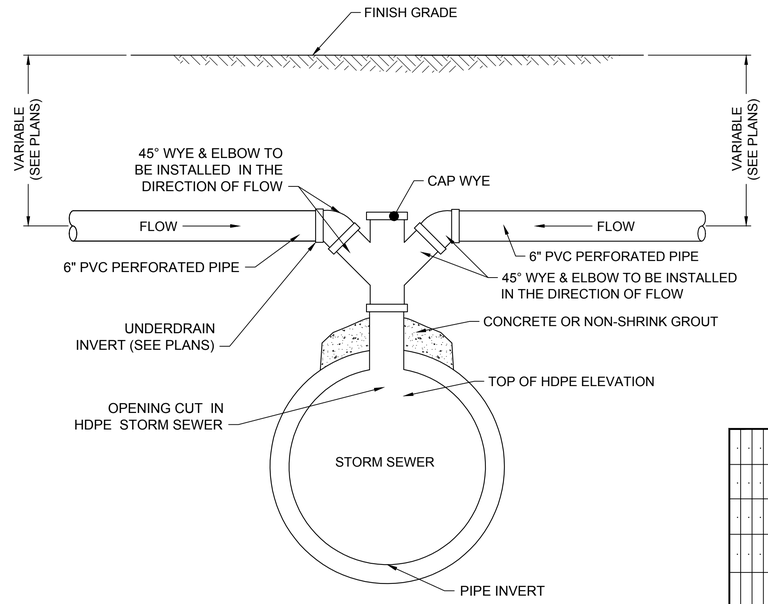
1. GEOTEXTILE PLACEMENT: THE GEOTEXTILE SHALL BE PLACED ON A SMOOTH GRADED SURFACE APPROVED BY THE ENGINEER. THE GEOTEXTILE SHALL BE PLACED IN SUCH A MANNER THAT IT WILL NOT EXCESSIVELY STRETCH OR TEAR UPON PLACEMENT OF THE OVERLYING MATERIALS. CARE SHOULD BE TAKEN TO PLACE THE GEOTEXTILE IN INTIMATE CONTACT WITH THE SOIL SUCH THAT NO VOID SPACES EXIST BETWEEN THE UNDERLYING SOIL AND THE GEOTEXTILE. ANCHORING OF THE GEOTEXTILE SHALL BE ACCOMPLISHED THROUGH THE USE OF KEY TRENCHES OR APRONS AT THE CREST AND TOE OF SLOPE.

2. GEOTEXTILE SHEETS SHALL BE JOINED BY EITHER SEWING OR OVERLAPPING. ALL OVERLAPS AND SEAMS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. OVERLAPPED SHEETS SHALL HAVE A MINIMUM OVERLAP OF 18 IN. EXCEPT WHERE PLACED UNDERWATER WHERE THE OVERLAP SHALL BE A MINIMUM OF 3 FT. OVERLAPS SHALL BE CONSTRUCTED WITH THE UPSTREAM SHEET PLACED OVER THE DOWNSTREAM SHEET OR THE UPSLOPE SHEET PLACED OVER THE DOWNSLOPE SHEET. ALL OVERLAPS SHALL BE PINNED ON 3 FT. CENTERS TO HOLD THE OVERLAP IN PLACE DURING STONE PLACEMENT. PINS ARE RECOMMENDED TO BE 3/16 IN. DIAMETER, 18 IN. LONG STEEL PINS POINTED AT ONE END, AND FITTED WITH A 1.5 IN. DIAMETER WASHER AT THE OTHER.

3. CARE SHALL BE TAKEN TO AVOID CONTAMINATION OF THE GEOTEXTILE DURING CONSTRUCTION. CONTAMINATED GEOTEXTILE SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. DAMAGED GEOTEXTILE SHALL BE REMOVED OR REPAIRED AS DIRECTED BY THE ENGINEER AT NO COST TO THE OWNER A GEOTEXTILE PATCH MAY BE PLACED OVER DAMAGED AREAS IF APPROVED BY THE ENGINEER. THE PATCH SHALL EXTEND 3 FT. BEYOND THE PERIMETER OF THE TEAR OR DAMAGE.

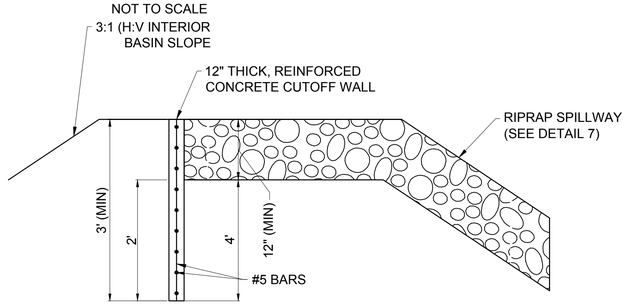
4. GRAVEL AND RIP RAP: GRAVEL AND RIP RAP PLACEMENT SHALL BEGIN AT THE TOE AND PROCEED UP THE SLOPE. RIP RAP SHALL NOT BE DROPPED ONTO THE GEOTEXTILE FROM A HEIGHT OF MORE THAN 1 FT. GRAVEL SHALL NOT BE DROPPED ONTO THE GEOTEXTILE FROM A HEIGHT EXCEEDING 3 FT. ANY GEOTEXTILE DAMAGED DURING PLACEMENT OF RIP RAP OR GRAVEL SHALL BE REPLACED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE. IN UNDERWATER APPLICATIONS, THE GEOTEXTILE AND REQUIRED THICKNESS OF RIP RAP SHALL BE PLACED THE SAME DAY.

SLOPE DETAIL — 2 / C100 C101
NOT TO SCALE

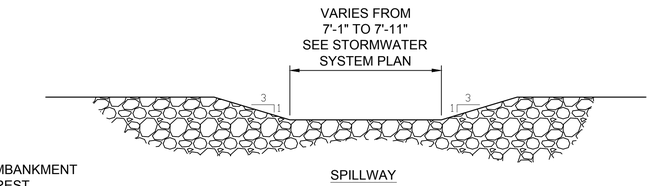


NOTES:
1. STANDARD MANUFACTURER FITTINGS SHALL BE USED TO CONNECT VERTICAL UNDERDRAINS TO 6" PVC UNDERDRAINS AND OUTLET PIPES.
2. INVERTS FROM OPPOSITE DIRECTIONS MAY NOT BE AT THE SAME ELEVATIONS AS SHOWN IN DETAIL. REFER TO THE PLANS FOR INVERT ELEVATIONS.

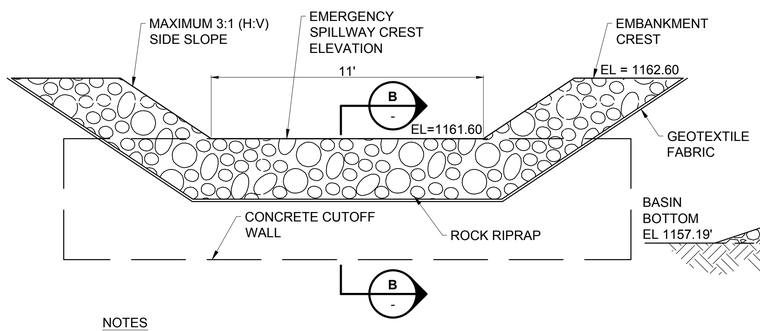
UNDERDRAIN CONNECTION TO STORM DRAIN PIPE — 3 / C104
NOT TO SCALE



SECTION B-B

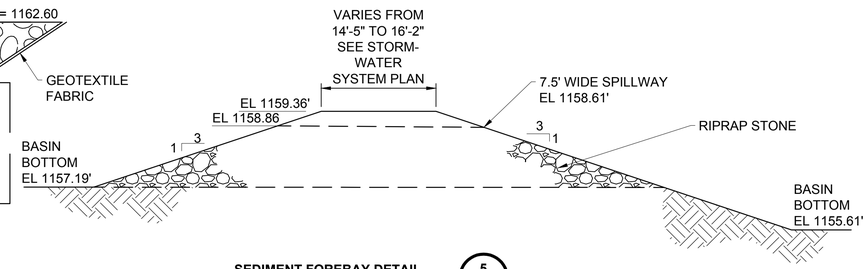


SPILLWAY



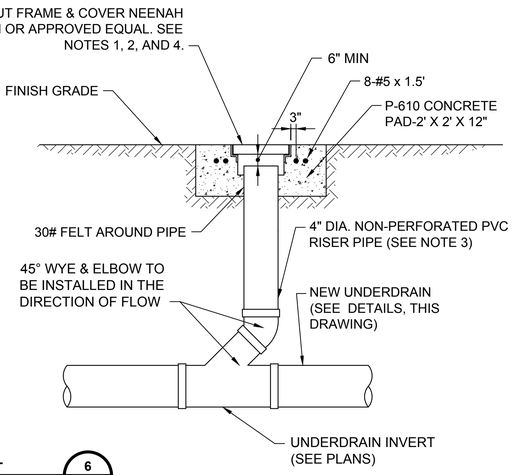
NOTES
1. SEE SECTION THROUGH SPILLWAY DETAIL 1 FOR FURTHER INFORMATION.

SPILLWAY APRON — 4 / C104
NOT TO SCALE



SEDIMENT FOREBAY DETAIL — 5 / C104
NOT TO SCALE

NOTES:
1. MANHOLE FRAME AND COVER SHALL BE DUCTILE IRON DESIGNED TO HS-20 LOADINGS.
2. NO LOAD SHALL BE TRANSFERRED FROM MANHOLE FRAME AND COVER TO 4" PVC UNDERDRAIN CLEANOUT OR 6" COLLECTION STRUCTURE.
3. STANDARD MANUFACTURER FITTINGS SHALL BE USED TO CONNECT VERTICAL UNDERDRAINS TO 6" PVC UNDERDRAINS AND OUTLET PIPES.
4. ALL UNDERDRAIN CLEANOUT AND COLLECTION STRUCTURE COVERS SHALL BE BOLT DOWN TYPE.
5. INVERTS FROM OPPOSITE DIRECTIONS MAY NOT BE AT THE SAME ELEVATIONS AS SHOWN IN DETAIL REFER TO THE PLANS FOR INVERT ELEVATIONS.



UNDERDRAIN CLEANOUT — 6 / C104
NOT TO SCALE

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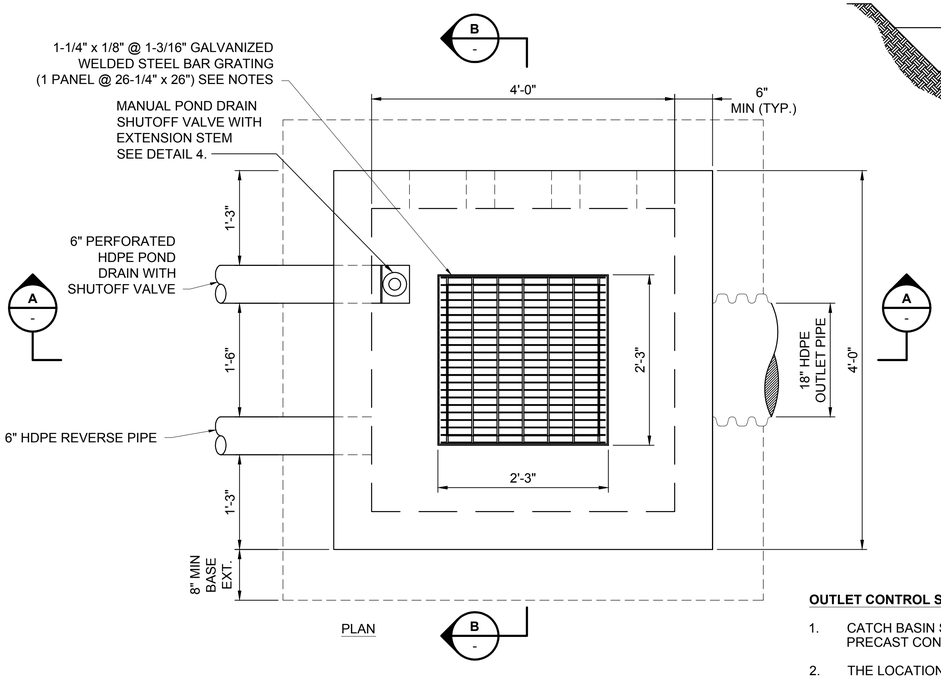
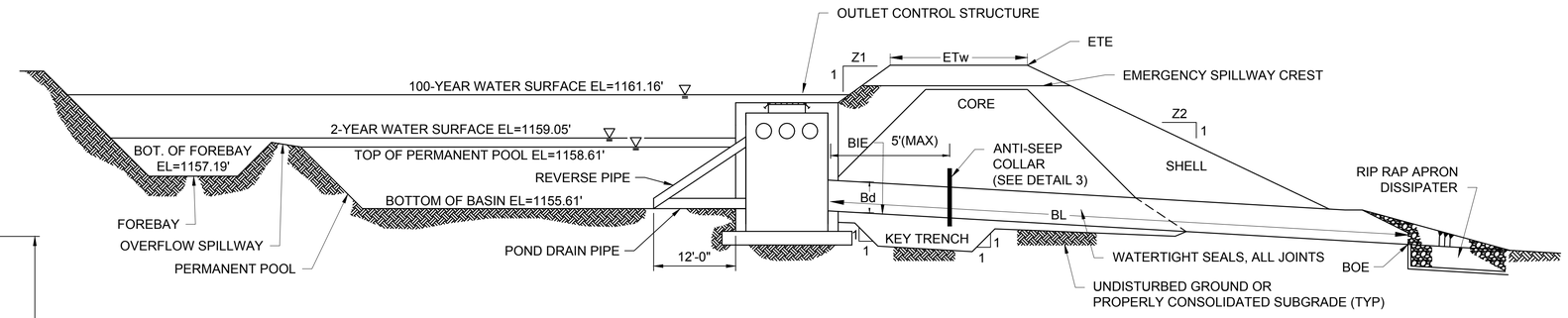
SHEET 17 OF 19
NPTT117-C507
REVISION: XXX



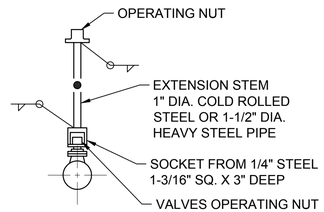


BASIN NO.	Z1 (FT)	Z2 (FT)	BARREL					EMBANKMENT		
			DIA Bd (IN)	INLET ELEV BIE (FT)	MAT'L	LENGTH BL (FT)	OUTLET ELEV BOE (FT)	TOP ELEV ETE (FT)	TOP WIDTH ETw (FT)	CREST (FT)
1	3	2	18	1155.50	HDPE	25'	1158.00	1162.60	6	1161.60

DETENTION BASIN CROSS SECTION 1 / C104
NOT TO SCALE

OUTLET CONTROL STRUCTURE NOTES:

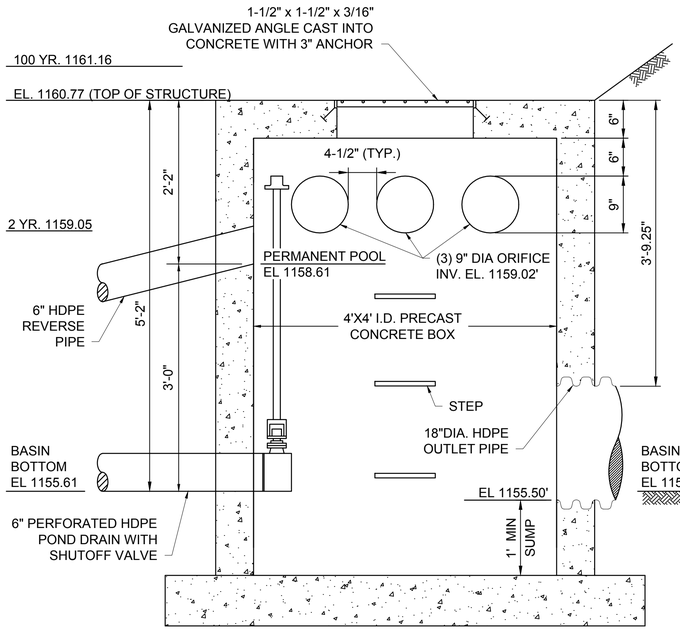
1. CATCH BASIN STRUCTURE IS TO BE PRECAST CONCRETE.
2. THE LOCATION AND ELEVATION INDICATED ON NPTT107-C104 ARE AT THE TOP CENTER OF THE GRATE. THE ORIFICE HOLES SHOULD BE PLACED AT THE ELEVATIONS AS SHOWN ON THE PLANS AND DETAILS.
3. GRATING SHALL BE AMICO STANDARD WELDED TYPE "W" 19W4 RESISTANCE WELDED GRATING AS MANUFACTURED BY ALABAMA METAL INDUSTRIES CORP. OR ENGINEERING APPROVED EQUAL.



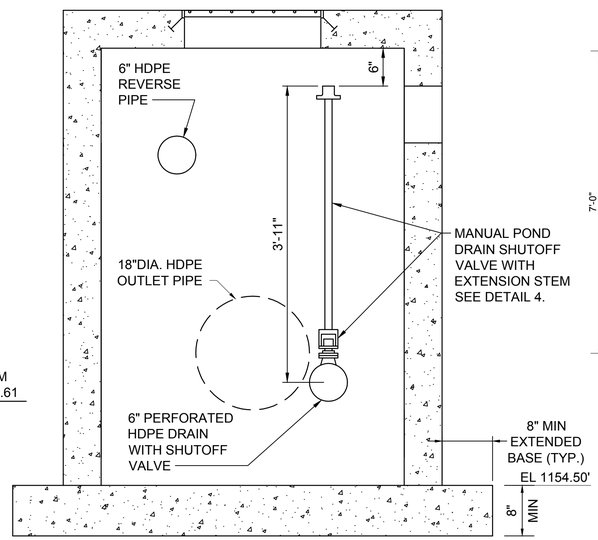
VALVE DETAIL 4 / -
NOT TO SCALE

NOTES:

1. WRAP PIPE WITH "RAM-NEK" OR EQUIVALENT WHERE PIPE IS EXPOSED TO CONCRETE PRIOR TO POURING.
2. EXCAVATION & BACKFILL SHALL BE AS SPECIFIED.
3. DO NOT PLACE WITHIN 2 FEET OF A PIPE JOINT.
4. REFER TO DETAIL 1 FOR LOCATION.

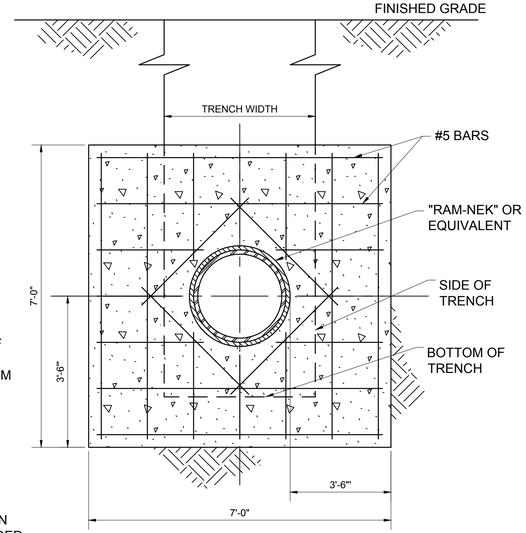


SECTION A-A



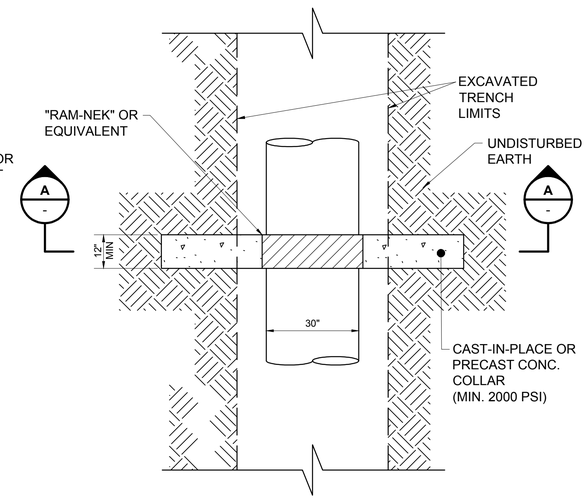
SECTION B-B

OUTLET CONTROL STRUCTURE 2 / C104
NOT TO SCALE



SECTION A-A

ANTI SEEP COLLAR 3 / -
NOT TO SCALE



PLAN

This document has been digitally sealed.
Oct 5 2015

FOR PERMITTING PURPOSES ONLY NOT FOR CONSTRUCTION

NO.	ISSUED FOR PERMITTING REVISION	DATE	DRWN	ChkD	APPRV
1		10/1/15	JJS	RLR	BSS

Transmission Business

TRANSITION STATION #1
CONSTRUCTION DETAILS

DATE: 10/1/2015
SCALE: NTS

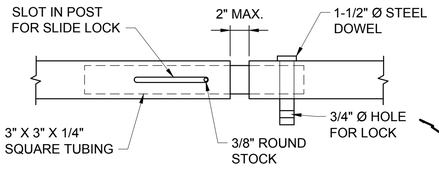
DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN: OLD CROWN ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 18 OF 19
NPTT118-C508
REVISION: XXX

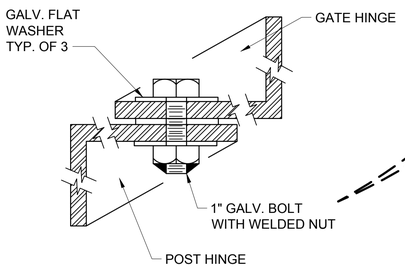
\\BMCD\DFS\CLIENTS\TND\NUSC\58466_NPT\DESIGN\SUBSTATION\100-TRANSITION_STATION-1\CADD\CIVIL-SITE\NPTT118-C508.DWG 10/2/2015 7:34 PM KAMARX

NOTES:

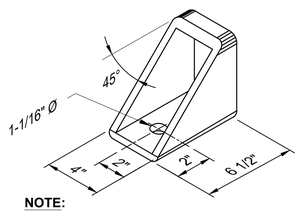
1. GATE ASSEMBLY AS MFG. BY JOHN BROWN & SONS, WEARE, NH 603-529-7975 OR APPROVED EQUAL.
2. ENTIRE GATE ASSEMBLY SHALL BE PRIMED & TOP COATED FOREST GREEN AFTER FABRICATION.



SLIDE LOCK DETAIL

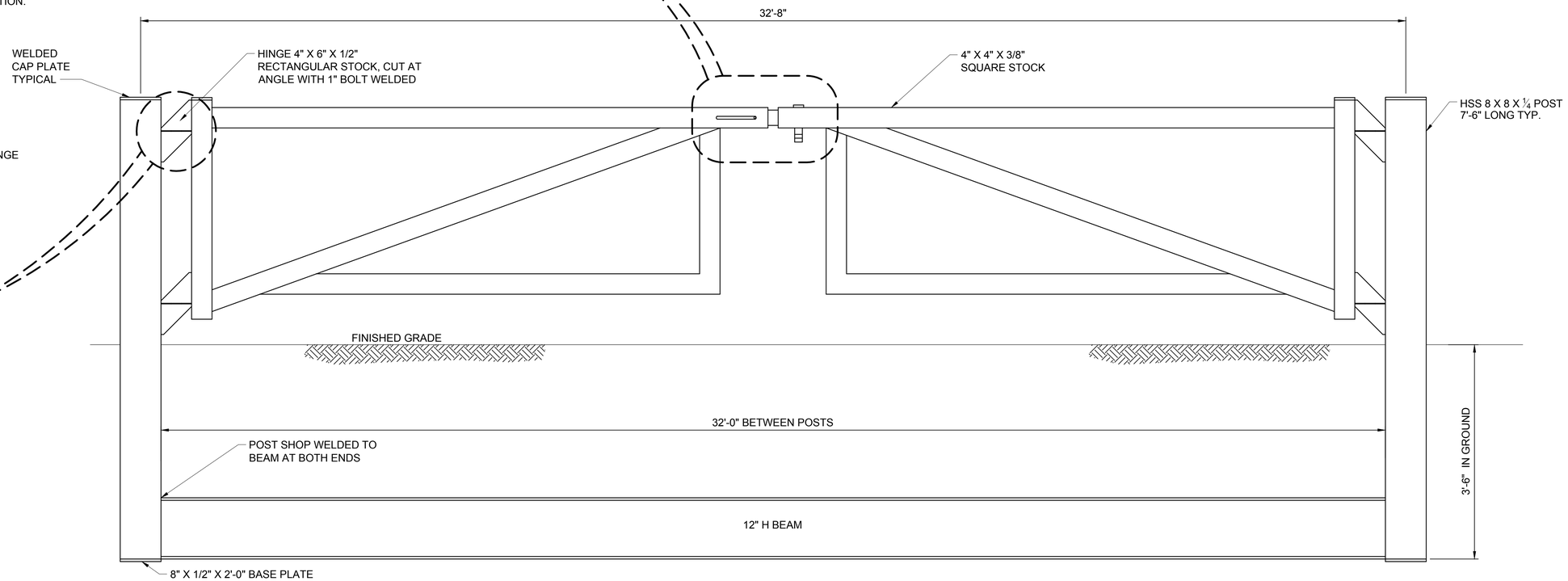


HINGE BOLT DETAIL



NOTE:
CUT FROM 4" x 6" x 1/2" RECT. TUBING

HINGES



32' ROW GATE
DOUBLE LEAF TUBULAR
WITH BURIED CROSS BEAM — 1 / C100
NOT TO SCALE

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Oct 5 2015

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NO.	ISSUED FOR: PERMITTING / REVISION	DATE	DRWN	ChkD	APPRV.
1		10/1/15	JJS	RLR	BSS

THE NORTHERN PASS
Transmission Business

TRANSITION STATION #1
CONSTRUCTION DETAILS

DATE: 10/1/2015
SCALE: NTS

DES: JJS | CHK: RLR
DRW: JJS | APR: BSS

TOWN: OLD CANNN ROAD, PITTSBURG, NH
TRANSMISSION LINE:
MILE NO:
SHEET 19 OF 19
NPTT119-C509
REVISION: XXX